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ABSTRACT

This book is intended to make common fourth-grade mathematical concepts both interesting and easy to understand. The text is designed to meet the particular needs of those children who have "accumulated discouragements" in learning mathematics. The reading level required of pupils has been reduced. Individual chapter titles are: Properties: Geometry: Fractions: and Techniques of Addition and Subtraction of Whole Numbers. (MP)

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Southwest Educational Development Laboratory

MATHEMATICS Book L

ED190392

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PREFACE

The exercises included in this book were prepared to make mathematics both interesting and easy to understand.

Teachers and mathematicians with the Southwest Educational Development Laboratory adapted these materials. They were guided by the following beliefs:

- Children are interested in mathematics.
- Learning is enhanced by emphasis on understanding of concepts rather than on memorization of rules, and understanding results from being actively involved in experiences from which concepts are to be abstracted.
- Alternative sequences of mathematical concepts can be followed, and yet the structure of mathematics can be preserved.
- Children can learn more mathematics than they are now learning.

Edwin Hindsman
Executive Director

ACKNOWLEDGMENTS

These materials were prepared by the Southwest Educational Development Laboratory's Mathematics Education Program during two summer writing conferences. The 1968 Summer Mathematics Writing Conference participated in the initial adaptation of these materials, and the 1969 Summer Mathematics Writing Conference participated in their revision.

The 1969 Summer Mathematics Writing Conference, held in Austin, Texas, was coordinated by Floyd Vest, Professor of Mathematics Education, North Texas State University, Denton, Texas. He was assisted by James Hodge, Professor of Mathematics, North Texas State University, and Palma Lynn Ross, Department of Mathematics, University of Texas at El Paso.

Participants for the 1969 writing conference included: Carmen Montes, Santiago Peregrino, Rebecca Rankin, Rudolph Sanchez, and Flora Ann Sanford, El Paso Independent School District, El Paso, Texas; Jimmye Blackmon, J. Leslie Fauntleroy, Barbara Graham, and Sophie Louise White, East Baton Rouge Parish Schools, Baton Rouge, Louisiana; Lawrence A. Couvillon and James Keisler, Louisiana State University, Baton Rouge, Louisiana and Socorro Lujan, Mathematics Education, Southwest Educational Development Laboratory, Austin, Texas.

Consultants for this conference included: Sam Adams, Louisiana State University, Baton Rouge, Louisiana; James Anderson, New Mexico State University, Las Cruces, New Mexico; R. D. Anderson, Louisiana State University, Baton Rouge, Louisiana; Robert Cranford, North Texas State University, Denton, Texas; William T. Guy, Jr., University of Texas at Austin, Austin, Texas;

Lenore John, School Mathematics Study Group, Stanford, California; Houston T. Karnes, Louisiana State University, Baton Rouge, Louisiana, and B. G. Nunley, North Texas State University, Denton, Texas.

The 1968 Summer Mathematics Writing Conference was coordinated by James Keisler, Professor of Mathematics, Louisiana State University. Participants for this conference included: Stanley E. Ball, University of Texas at El Paso, El Paso, Texas; Lawrence A. Couvillon, Louisiana State University, Baton Rouge, Louisiana; Rosalie Espy, Alamo Heights Independent School District, San Antonio, Texas; J. Leslie Fauntleroy, East Baton Rouge Parish Schools, Baton Rouge, Louisiana; Norma Hernandez, University of Texas at Austin, Austin, Texas; Glenda Hunt, University of Texas at Austin, Austin, Texas; Carmen Montes, El Paso Independent School District, El Paso, Texas; Santiago Peregrino, El Paso Independent School District, El Paso, Texas; Rebecca Rankin, El Paso Independent School District, El Paso, Texas; Ida Slaughter, East Baton Rouge Parish Schools, Baton Rouge, Louisiana; and Sister Gloria Ann Fielder, CDP, Our Lady of the Lake College, San Antonio, Texas.

Consultants for this conference included: R. D. Anderson, Louisiana State University, Baton Rouge, Louisiana; William DeVenney, School Mathematics Study Group, Stanford, California; Sister Claude Marie Faust, Incarnate Word College, San Antonio, Texas; Mary Folsom, University of Miami, Coral Gables, Florida; William T. Guy, Jr., University of Texas at Austin, Austin, Texas; Houston T. Karnes, Louisiana State University, Baton Rouge, Louisiana; William McNabb, St. Marks School, Dallas, Texas; Sheldon Myers, Educational Testing Service, Princeton, New Jersey; and Ann Tinsley, East Baton Rouge Parish Schools, Baton Rouge, Louisiana.

Acknowledgment also is given to the Educational Development Center, Newton, Massachusetts, and to the School Mathematics Study Group, Stanford, California, for their permission to use materials from their programs as a foundation for adaptation and development.

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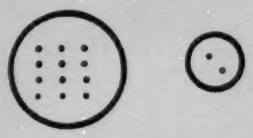
Properties

UNIT 4

Complete.



$(4 \times 3) + 2 = 14$

1. $(3 \times 2) + a = 8$ a is _____.	5. $21 = (r \times r) + 5$ r is _____.
2. $5 + (e \times 5) = 10$ e is _____.	6. $(d \times 4) + 5 = 13$ d is _____.
3. $j = (8 \times 4) + 13$ j is _____.	7. $21 = (6 \times h) + 3$ h is _____.
4. $56 = (2 \times 8) + p$ p is _____.	8. $18 = (s \times s) + 2$ s is _____.

UNIT 4

Fill in the blanks with < or > or =.

1. $(4 + 2) + 2$ _____ $4 + (2 + 2)$

2. $(4 \times 2) \times 2$ _____ $4 \times (2 \times 2)$

3. $(4 - 2) - 2$ _____ $4 - (2 - 2)$

4. $(4 \div 2) \div 2$ _____ $4 \div (2 \div 2)$

5. $(3 + 2) + 1$ _____ $3 - (2 - 1)$

6. $(8 \div 4) \div 2$ _____ $8 \div (4 \div 2)$

7. $(16 \div 4) \div 2$ _____ $16 \div (4 \div 2)$

8. $(20 - 10) - 8$ _____ $20 - (10 - 8)$

9. $(2 \times 2) \times 3$ _____ $2 \times (2 \times 3)$

10. $(3 - 2) - 1$ _____ $3 - (2 - 1)$

11. $4 \times (5 + 2)$ _____ $(4 \times 5) + (4 \times 2)$

12. $4 \times (5 + 2)$ _____ $(4 \times 5) + 2$

13. $(3 \times 2) + (3 \times 3)$ _____ $3 \times (2 + 3)$

UNIT 4

Write the simplest numeral for each.

1. $3 + (5 \times 2)$
2. $(3 + 5) \times 2$
3. $(100 \div 10) \times (50 \div 5)$
4. $(80 - 20) \times (25 \div 5)$
5. $(4 + 6) \times 7$
6. $(4 \times 7) + (6 \times 7)$
7. $(7 \times 2) \times 2$
8. $7 \times (2 + 2)$
9. $2 \times (4 + 3) \times 3$
10. $(2 \times 4) + (3 \times 3)$
11. $(5 + 4) \times 3$
12. $(5 \times 3) + (4 \times 3)$
13. $3 + (5 \times 2) + 4$
14. $(3 + 5) \times (2 + 4)$
15. $(3 \times 2) + (5 \times 2) + (3 \times 4) + (5 \times 4)$
16. $(6 \times 2) + (3 \times 4) + (12 \times 1) + (24 \div 2)$
17. $(8 \times 5) \times (10) \times 3$
18. $8 + (5 \times 10) + 3$

UNIT 4

Supplementary Page

Write the simplest numeral for each.

1. $(2 \times 3) + 3$

2. $(2 + 3) \times (4 + 3)$

3. $(8 + 4) - (3 + 4)$

4. $8 + (4 - 3) + 4$

5. $(6 + 3) \div 3$

6. $(6 \div 3) + (3 \div 3)$

7. $(8 \times 4) - (2 \times 2)$

8. $8 \times (4 - 2) \times 2$

9. $(20 - 10) - (8 - 2)$

10. $20 - (10 - 8) - 2$

11. $(2 + 3) + (2 + 3) + (2 \div 3)$

12. $(2 \times 3) + (2 \times 3) + (2 \times 3)$

13. $(2 \times 3) + (2 \times 3) + (1 + 0)$

14. $(5 \times 0) + (6 \times 0) + (7 \div 1)$

UNIT 4

What symbol (> or < or =) makes the sentence true?

1.	(7 + 4) - 3	____	(24 ÷ 3) x 1
2.	(15 - 10) x 2	____	(7 + 8) - 7
3.	14 + (12 ÷ 3)	____	(24 + 12) ÷ 2
4.	(6 x 5) + 3	____	(18 + 10) + 6
5.	23 - (8 + 5)	____	(40 + 2) ÷ 2
6.	(19 + 7) - 4	____	(32 ÷ 8) + 21
7.	(5 - 2) + 16	____	8 + (6 + 2)
8.	(27 ÷ 9) + 9	____	27 ÷ (3 + 6)
9.	4 x (20 - 10)	____	(7 x 5) + 5
10.	(25 + 25) - 25	____	5 x (5 + 5)
11.	7 x (12 ÷ 2)	____	(12 ÷ 2) + 7
12.	14 - (8 + 6)	____	(8 + 6) - 14
13.	(14 - 8) + 6	____	8 + (14 - 6)
14.	(20 ÷ 2) ÷ 2	____	20 - (18 ÷ 3)
15.	22 - (14 + 2)	____	(14 + 2) - 13
16.	(3 x 4) + (3 x 5)	____	(4 x 3) + (5 x 3)
17.	24 - (8 - 8)	____	24 - (8 x 0)
18.	24 ÷ (8 ÷ 8)	____	24 - (8 - 0)

UNIT 4

Make the sentences true.

1.

Mary has 3 baskets. There are 6 eggs in each basket.
Here is a sentence about Mary's eggs.

$3 \times 6 = e$

What number does **e** stand for to make the sentence true?

e is _____.

Mary has _____ eggs.

---

2. Grace gives 7 more eggs to Mary. Here is a sentence about the number of eggs Mary has now.

$(3 \times 6) + 7 = a$

What number does **a** stand for to make the sentence true?

a is _____.

Now Mary has _____ eggs.

3. John has 5 bags of oranges. There are 10 oranges in each bag. Write a sentence about John's oranges.

John eats 8 of his oranges. Write a sentence about the number of oranges John has left.

s=_____

s is _____.

John has _____ oranges left.

---

4. There are 7 branches on a tree. Five birds are sitting on each branch. Eight birds fly away. Write a sentence about the number of birds left.

b=_____

What number does **b** stand for to make the sentence true?

b is _____.

There are _____ birds left.

UNIT 4

5.

Each of these triangles has 3 sides.
Each of these squares has 4 sides.
Write a sentence about the number of sides.

_____ = n .

What number makes the sentence true?

n is _____.

There are _____ sides.

---

6. Ben goes fishing on 4 days. He catches 8 fish each day. James goes fishing on 2 days. He catches 5 fish each day. How many fish are caught?
Write a sentence about the number of fish caught.

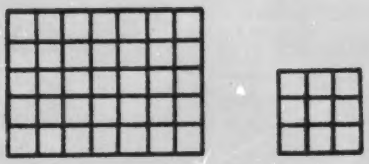
_____ = n .

What number makes the sentence true?

n is _____.

They caught _____ fish.

7. Write a sentence about the number of small squares you see.



e = _____

e is _____.

There are _____ small squares.

---

8. How many legs have 7 cows and 4 hens?
Write a sentence about the number of legs.

_____ = **u** .

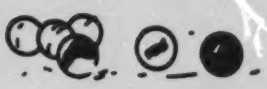
What number does **u** stand for to make the sentence true?

u is _____.

The animals have _____ legs.

UNIT 4

9. Four boys shared 24 marbles equally. John lost 2 of his marbles. Write a sentence about the number of marbles that John has left.



_____ = **t** .

What number does **t** stand for to make the sentence true?

t is _____.

John has _____ marbles left.

---

10. Two boys catch 24 fish. They give 6 fish to a friend. They share the rest of the fish equally. Write a sentence about the number of fish each boy has.

g = _____

What number does **g** stand for to make the sentence true?

g is _____.

Each boy has _____ fish.

Make each sentence true.

1. Seven children each made 4 animals from clay. The teacher saved six of them for a science exhibit. She put the others on display. How many animals were put on display?

n is _____.

_____ animals were put on display.

---

*2.

There were n peaches on the ground. A group of thirteen boys picked them up. Then 7 more peaches fell. These were also picked up. All the peaches were divided equally among the boys. Each received 2 peaches. How many peaches were on the ground at first?

n is _____.

There were _____ peaches on the ground at first.

(11)

UNIT 4

3. Robert had 32 marbles to give away. He divided them equally among 4 friends. Each friend already had **v** marbles of his own. Now each had 15 marbles. What number **v** of marbles did each have at first?

v is _____.

Each friend had _____ marbles at first.

---

4. A group of **n** boys each brought 8 bottle tops to school. They gave tops to other children who needed them. They gave a total of 14 tops away. They had 42 left. How many boys were there?

n is _____.

There were _____ boys.

---

5. Two boys had **r** beans together. They shared the **r** beans equally between them. Each boy lost two of his beans; each had 8 beans left. How many beans did they have together?

r is _____.

There were _____ beans.

*6. The teacher drew ▯ squares and ▯ triangles on the chalkboard. He drew a total of 56 line segments to make the sides of the figures. How many squares and triangles did he draw?

▯ is _____.

The teacher drew _____ squares and _____ triangles.

UNIT 4

Complete each Operation Machine.

Fill in missing numerals or signs.

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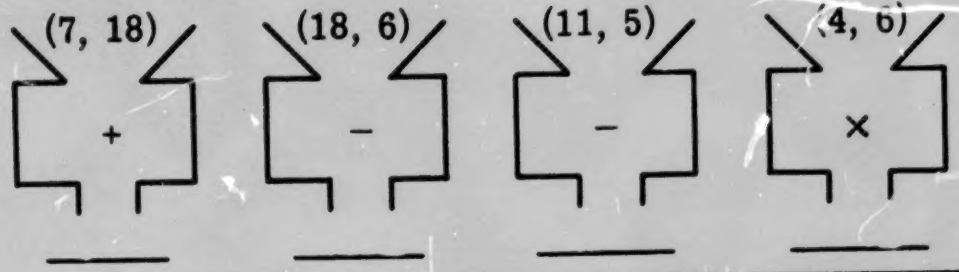

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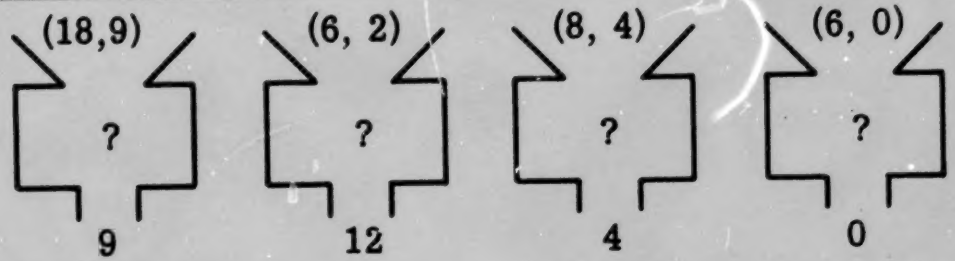

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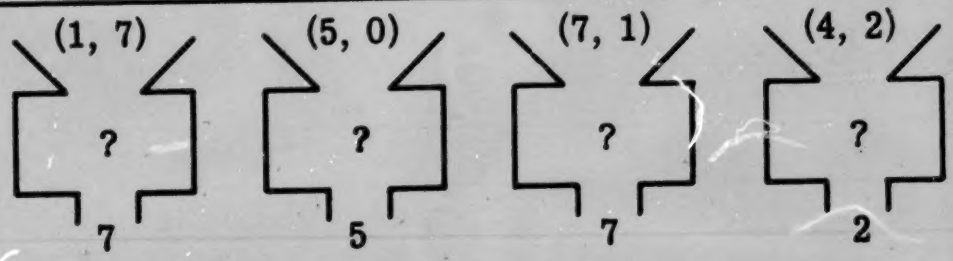

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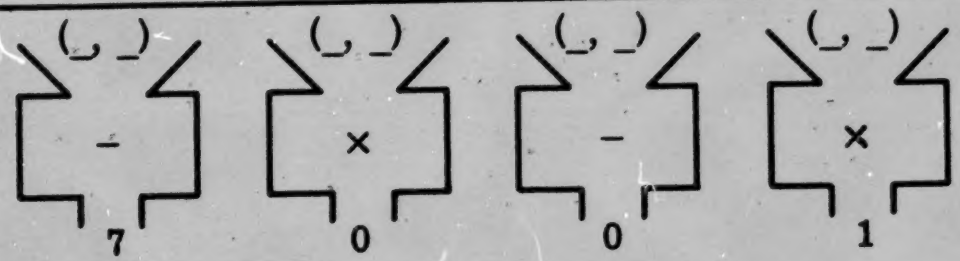

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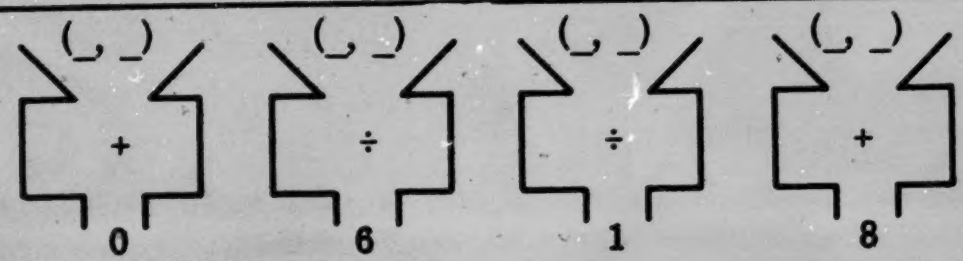

Complete each Operation Machine.

Fill in missing numerals or signs.

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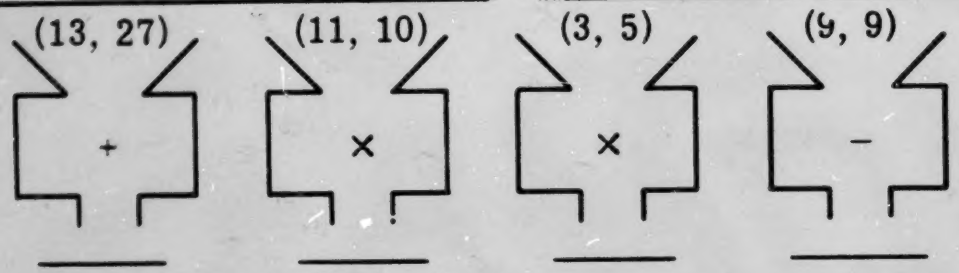

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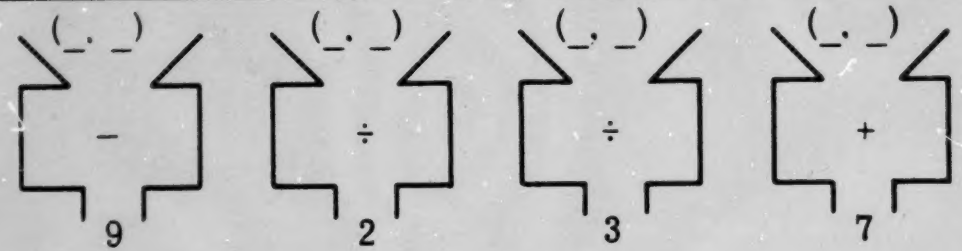

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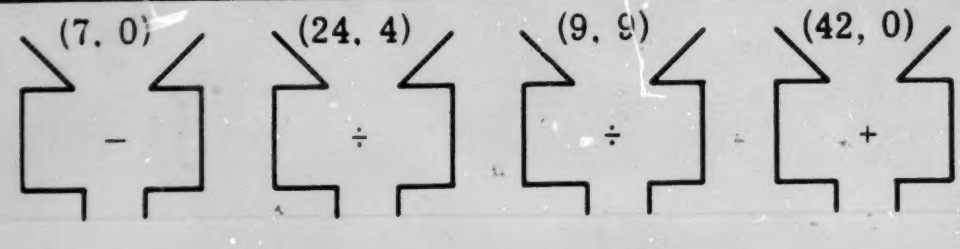

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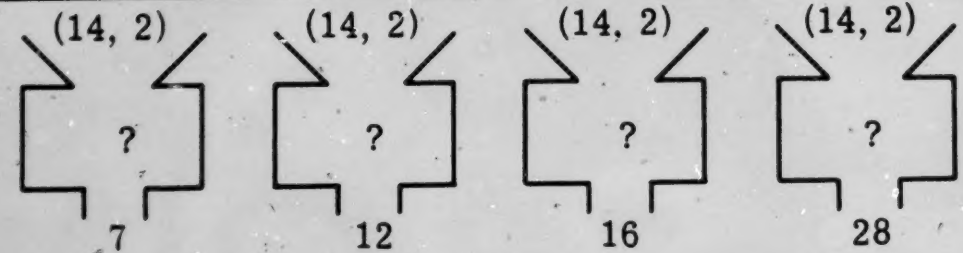

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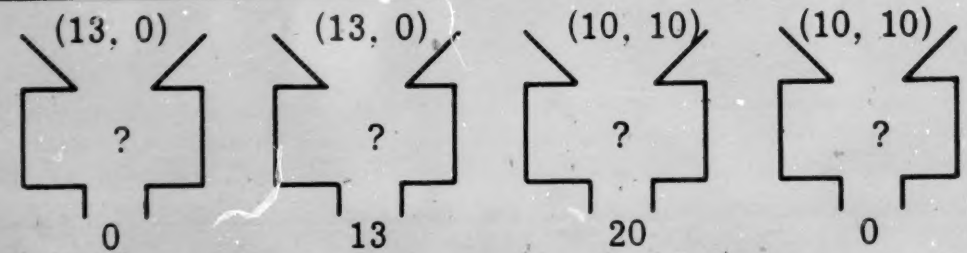

UNIT 4

Complete each Operation Machine

Fill in missing numerals or signs.

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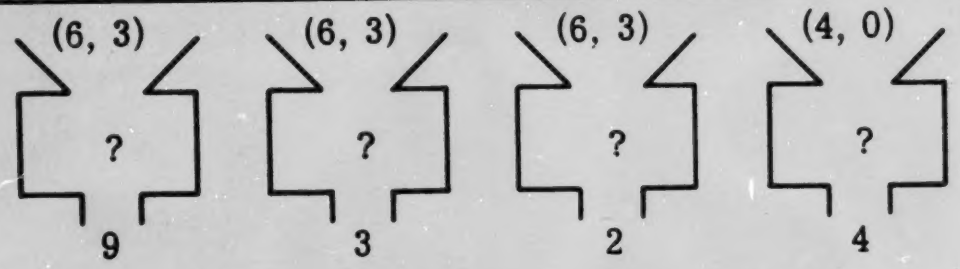

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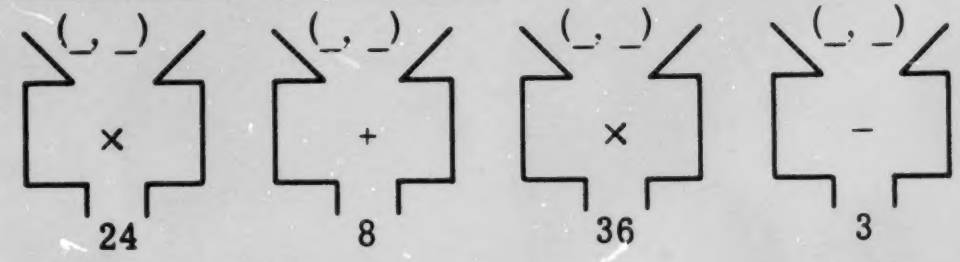

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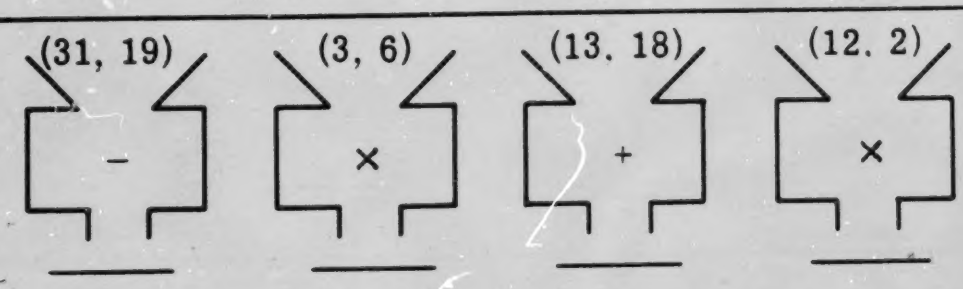

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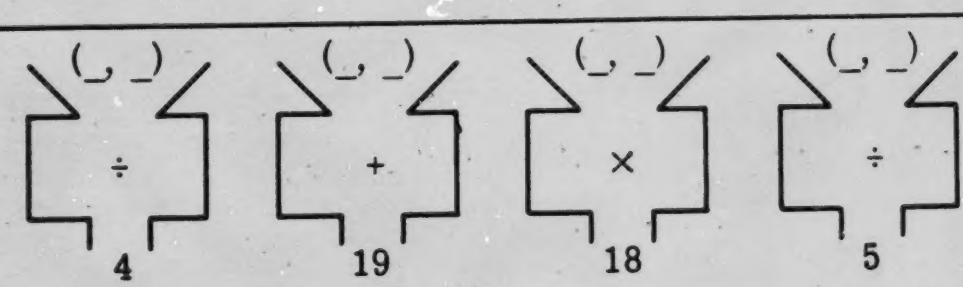

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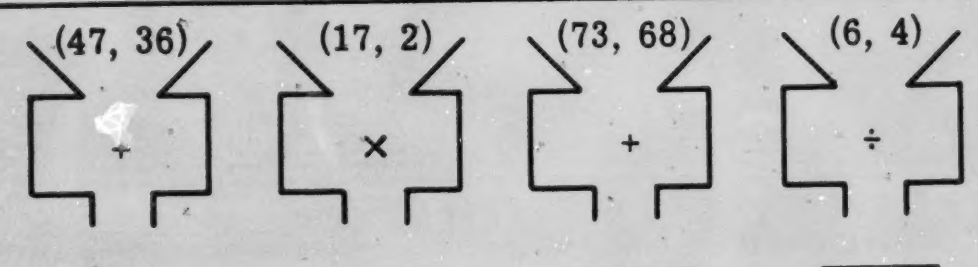

Complete each Operation Machine.

Fill in missing numerals or signs.

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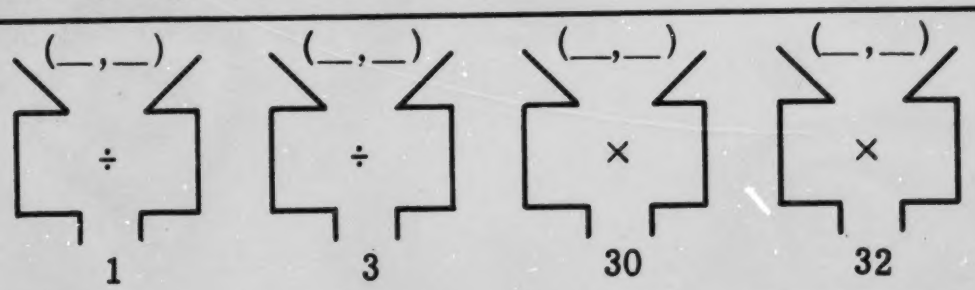

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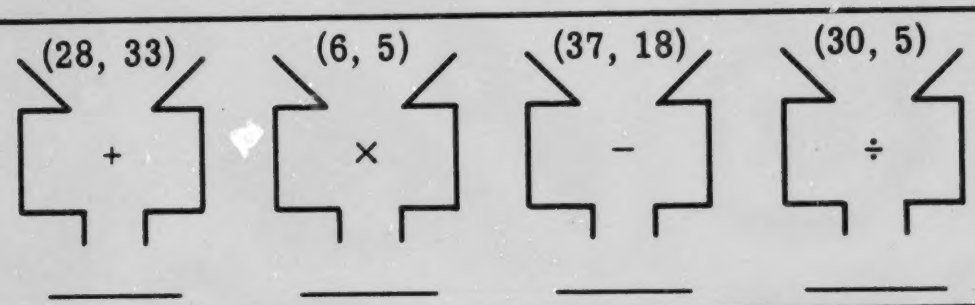

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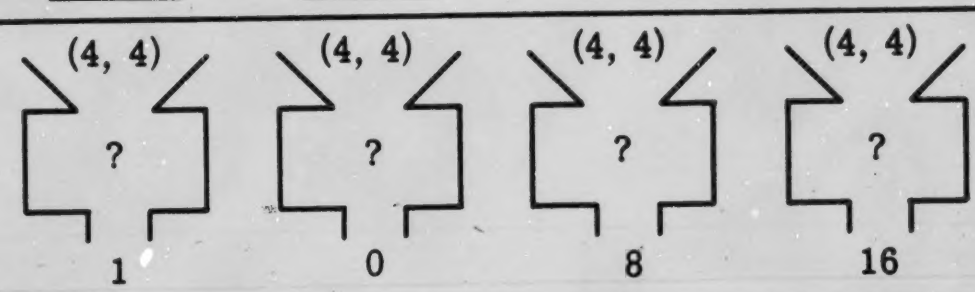

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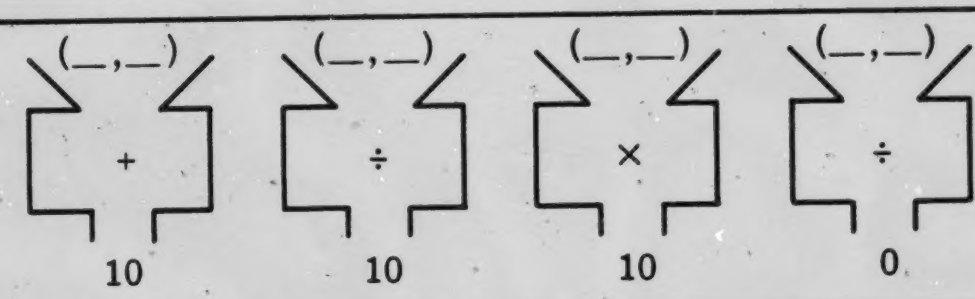

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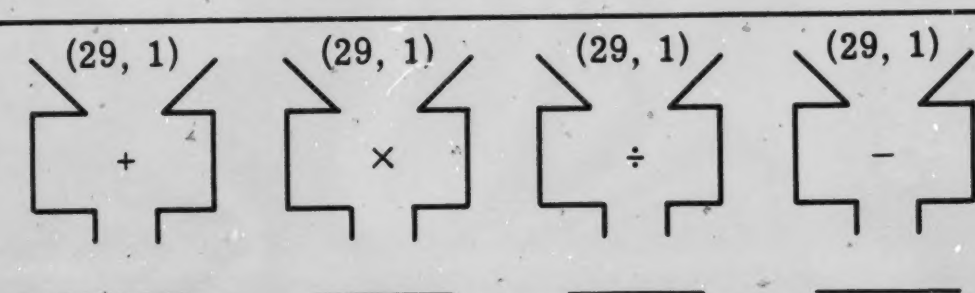


UNIT 4

Find what number makes the sentence true.

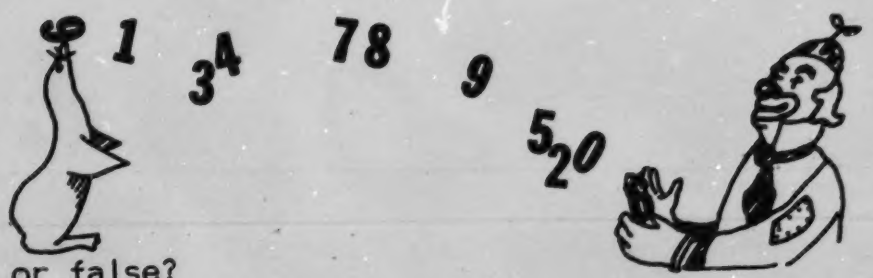
1. $9 + 7 = 7 + b$ b is _____.

2. $196 + 39 = c + 196$ c is _____.

3. $11 \times b = 83 \times 11$ b is _____.

4. $298 \times 7 = 7 \times p$ p is _____.

5. $10 + 184 = 184 + w$ w is _____.



True or false?

6. $3 + 5 > 5 + 2$ _____

7. $17 \times 16 = 16 \times 18$ _____

8. $1946 + 1310 = 1310 + 1946$ _____

9. $1324 \times 12 < 112 \times 1324$ _____

10. $1000 + 3000 = 3000 + 100$ _____

UNIT 4

What number makes the sentence true?

1. $3 \times 4 = 4 \times n$, n is _____.

2. $5 + s = 7 + 5$, s is _____.

3. $3 + 9 = 3 + a$, a is _____.

4. $1 \times 8 = y \times 1$, y is _____.

5. $5 \times 6 = 16 + c$, c is _____.

6. $d \times 9 = 9 \times 0$, d is _____.

7. $(4 + 6) + 8 = 3 \times b$, b is _____.

8. $(2 + s) + 0 = (3 + 2) + 0$, s is _____.

9. $w \times 18 = 18 \times 2$, w is _____.

10. $5 + g = 2 + 7$, g is _____.

11. $31 + 8 = 8 + m$, m is _____.

12. $(3 + 6) + 2 = n + (3 + 6)$, n is _____.

13. $(3 + 5) + 4 = 12 + h$, h is _____.

UNIT 4

What number makes the sentence true?

1. $(2 + 10) + 4 = 2 + (10 + a)$ _____
2. $(18 + b) + 11 = 18 + (13 + 11)$ _____
3. $d + (315 + 196) = (234 + 315) + 196$ _____
4. $(3 \times 5) \times 4 = b \times (5 \times 4)$ _____
5. $(8 \times c) \times 15 = 8 \times (12 \times 15)$ _____
6. $(k \times 20) \times 5 = 11 \times (20 \times 5)$ _____
7. $(462 + 11) + 8 = b + (11 + 8)$ _____
8. $25 \times (19 \times 4) = (w \times 19) \times 4$ _____

True or false?

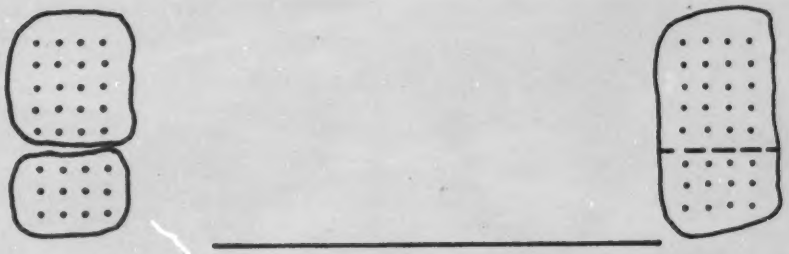
9. $(4 + 5) + 6 > 4 + (5 + 7)$ _____
10. $(3 \times 2) \times 5 = 3 \times (2 \times 5)$ _____
11. $(4 \times 7) \times 3 = 4 \times (6 \times 3)$ _____
12. $(15 + 17) + 25 > 15 + (16 + 25)$ _____
13. $(8 \times 19) \times 10 = 8 \times (19 \times 10)$ _____
14. $(40 \times 8) \times 30 < 30 \times (8 \times 30)$ _____

UNIT 4

Write sentences for the arrays of dots.

1.

_____

2. 

_____

3.

_____

4.

_____

UNIT 4

1. There are two boxes on a table. In one box are three rows of 6 nuts each. In the other box are three rows of 4 nuts each. How many nuts are in the two boxes?

2. Maria put 2 rings on each finger of her left hand. She put 2 rings on each finger of her right hand. How many rings did she put on her fingers?

3. In my garden there are five rows of trees with three trees in each row. There are 5 more rows of trees with 4 trees in each row. How many trees are in my garden?

4. There are 4 bicycles in one house and 5 bicycles in another house. How many wheels are on all of these bicycles?

UNIT 4

What number makes the sentence true?

1. $8 \times (10 + 6) = (8 \times 10) + (a \times 6)$ _____
2. $(b \times 5) + (b \times 7) = 9 \times (5 + 7)$ _____
3. $9 \times (8 + 7) = (c \times 8) + (c \times 7)$ _____
4. $(11 \times b) + (11 \times 6) = 11 \times (9 + 6)$ _____
5. $d \times (13 + 4) = (8 \times 13) + (8 \times 4)$ _____
6. $7 \times (b + 15) = (7 \times 6) + (7 \times 15)$ _____
7. $45 \times (3 + k) = (45 \times 3) + (45 \times 1)$ _____
8. $25 \times (3 + 7) = (25 \times 3) + (q \times 7)$ _____
9. $56 \times (4 + s) = (56 \times 4) + (56 \times p)$ _____
10. $(q \times 5) + (q \times 13) = 10 \times (5 + 13)$ _____

True or false?

11. $2 + (3 \times 5) = (2 + 3) \times (2 + 5)$ _____
12. $4 \times (8 + 6) = (4 \times 8) + (4 \times 7)$ _____
13. $(20 + 13) \times 7 = (20 \times 7) + (13 \times 7)$ _____
14. $16 \times (4 + 3) = (16 \times 4) + (16 \times 3)$ _____
15. $13 \times (17 + 10) = (13 \times 7) + (13 \times 10)$ _____

UNIT 4

Operations

1. Riddle: I am a number. If I am added to a number, the sum is always that same number. What number am I? _____

2. If a + b = a, what is b? _____

3. What property do exercises 1 and 2 show?

_____

4. Riddle: I am a number. If a number and I are multiplied, the product is always that number. What number am I? _____

5. If a x b = a, what is b? _____

6. What property do exercises 4 and 5 show?

_____

What number makes the sentence true?

7. 193 x n = 193, n is _____.

8. 45 = 45 + m, m is _____.

9. s = 415 x 1, s is _____.

10. (5 + h) + 0 = 5 + 5, h is _____.

11. z + 25 = 25, z is _____.

12. 39 = a x 39, a is _____.

UNIT 4

True or false?

1. $3 + 0 = 3$ _____
2. $4 + 7 = 7 + 5$ _____
3. $1 \times 73 = 73$ _____
4. $0 \times 20 = 30$ _____
5. $5 \times 8 = 8 \times 5$ _____
6. $1 \times 12 = 12$ _____
7. $43 + 0 = 43$ _____
8. $685 = 685 \times 1$ _____
9. $0 \times 5 = 5 \times 1$ _____
10. $35 + 62 = 62 + 35$ _____
11. $5 \times (4 + 3) = (5 \times 4) + (5 \times 3)$ _____
12. $5 \times (4 + 3) = (5 + 4) \times 3$ _____
13. $(4 \times 3) \times 3 = 4 \times (3 \times 3)$ _____
14. $3 + (2 + 12) = (3 + 2) + 12$ _____
15. $2 \times (3 \times 4) \times 5 = 2 \times 7 \times 5$ _____
16. $(3 + 6) \times 7 = 3 \times (6 + 7)$ _____

UNIT 4

What number makes the sentence true?

1. $3 + 17 = n + 3$, n is _____.

2. $a + 82 = 82$, a is _____.

3. $2 + (8 + s) = (2 + 8) + 12$, s is _____.

4. $14 \times b = 14$, b is _____.

5. $24 \times v = 2 \times 24$, v is _____.

6. $(14 + 2) \times 2 = w + (2 \times 2)$, w is _____.

7. $n \times 8 = 8$, n is _____.

8. $9 \times a = 0$, a is _____.

9. $(4 + 2) \times 3 = (4 + 2) \times c$, c is _____.

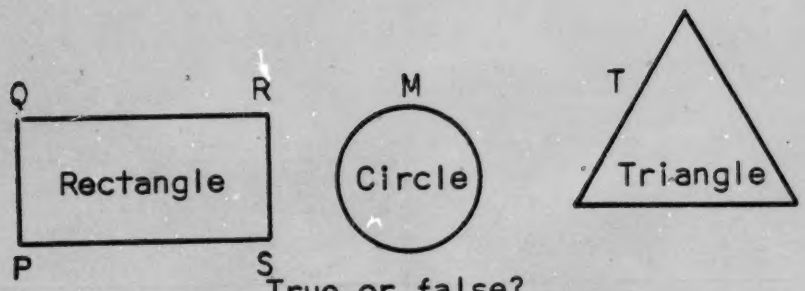
10. $(5 \times 2) \times 3 = s \times (2 \times 3)$, s is _____.

11. $a + (3 \times 2) = (100 \times 3) \times 2$, a is _____.

12. $n \times 1 = 5 \times 0$, n is _____.

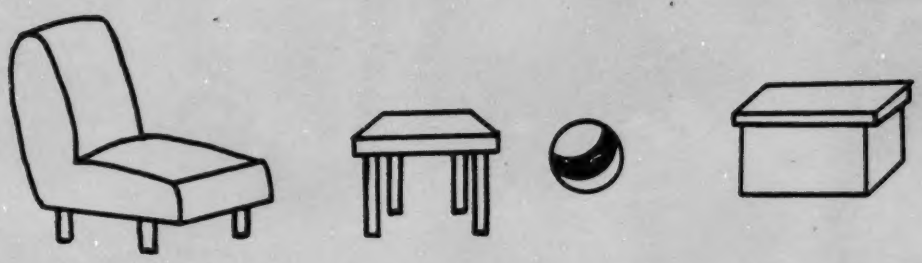
Geometry

UNIT 5



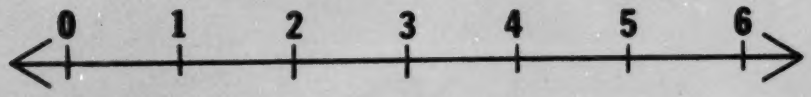
True or false?

Circle M is beside the rectangle PQRS. _____
Circle M is between the rectangle PQRS and triangle T. _____
Triangle T is to the left of circle M. _____
Triangle T is to the right of rectangle PQRS. _____
Rectangle PQRS is between circle M and triangle T. _____



Chair Table Ball Box

The table is _____ the chair and the ball.
The chair is to the _____ of the box.
The box is _____ the ball.
The table is to the _____ of the chair.

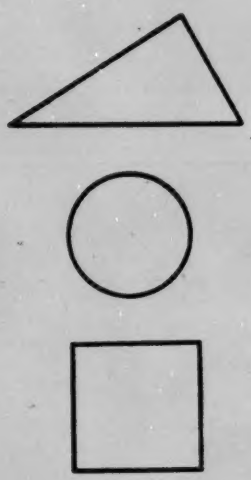


Number Line

UNIT 5

ABOVE, BELOW

1.



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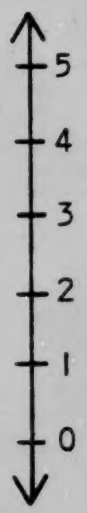

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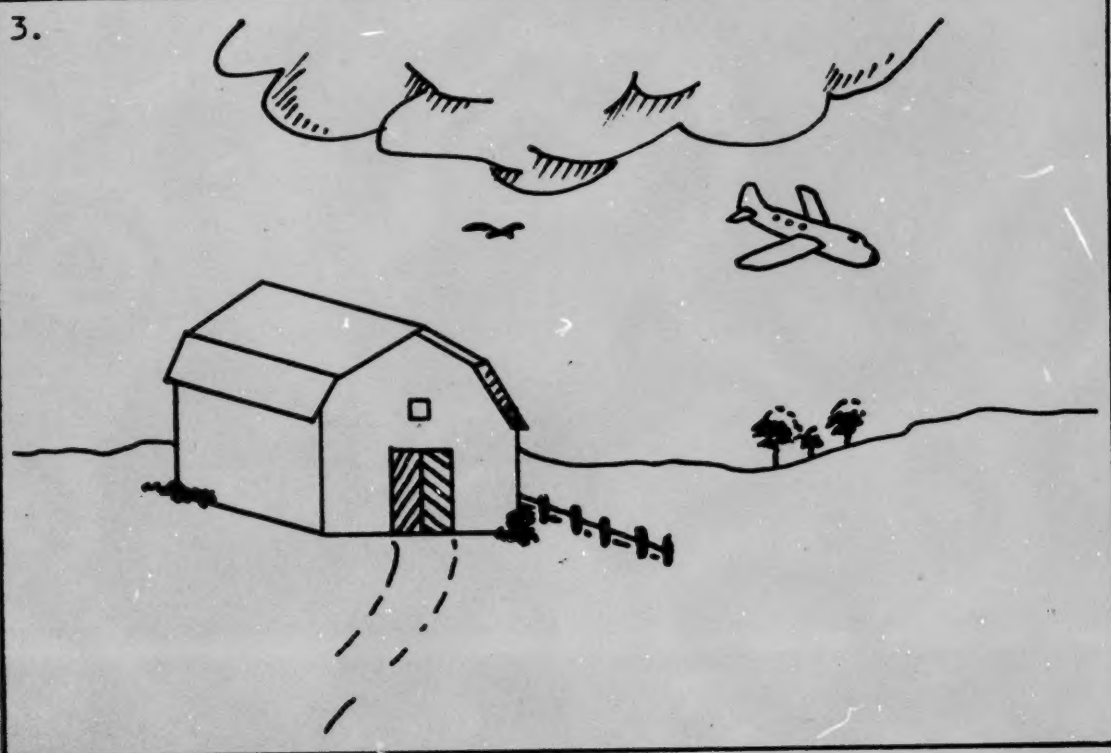


UNIT 5

INSIDE, OUTSIDE

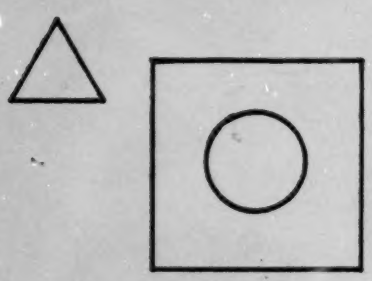
1. True or false?

The chair is inside the house. ____

The tree is outside the house. ____

The dog is outside the house. ____

2.



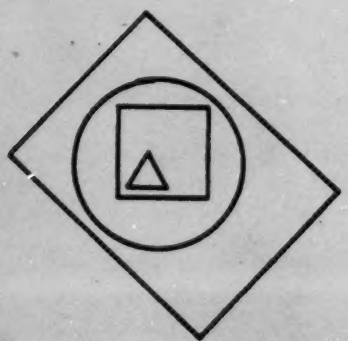
The circle is _____ the square.

The triangle is _____ the square.

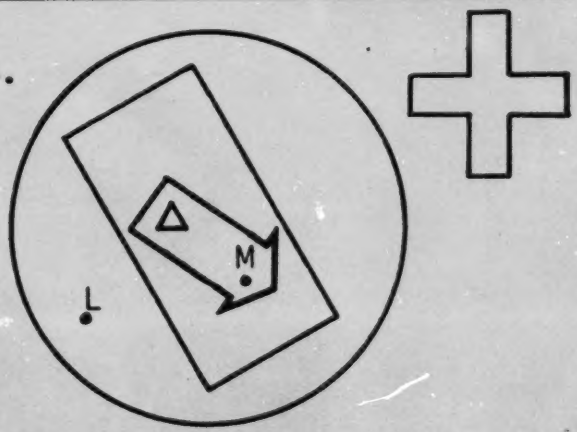
The triangle is _____ the circle.

The square is _____ the circle.

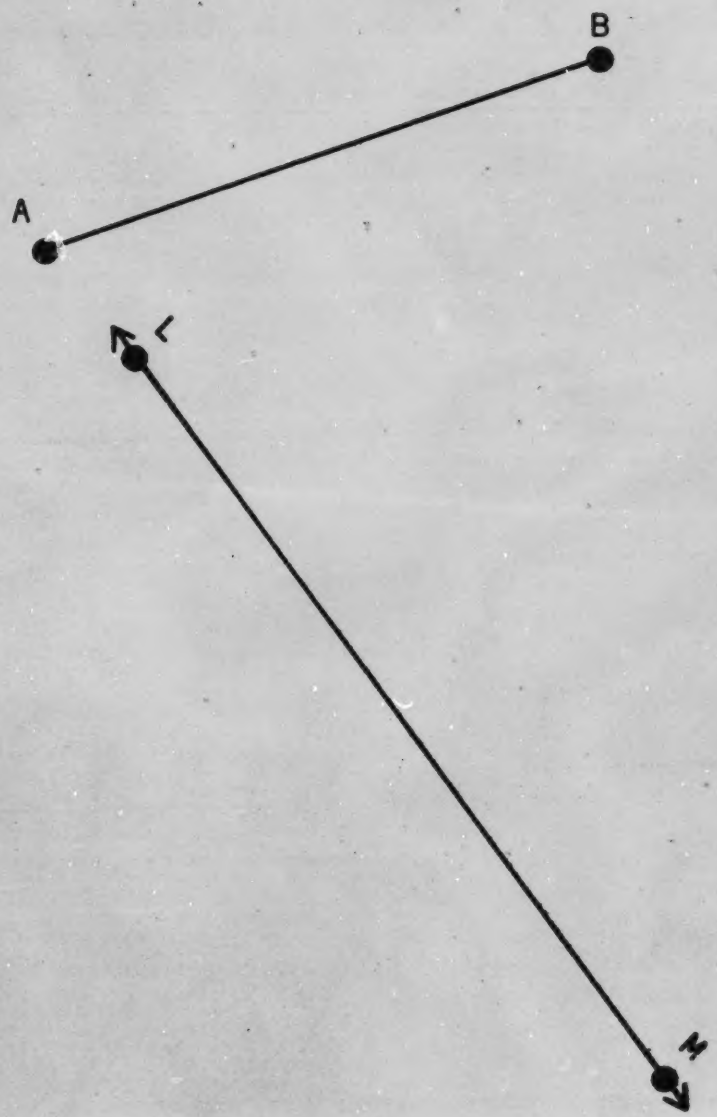
3.



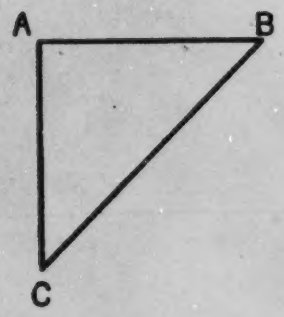
4.

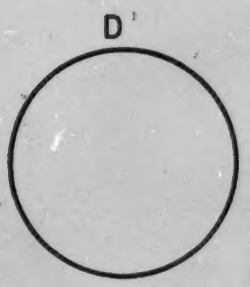


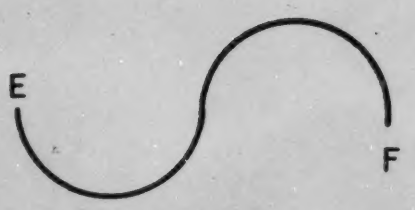
UNIT 5

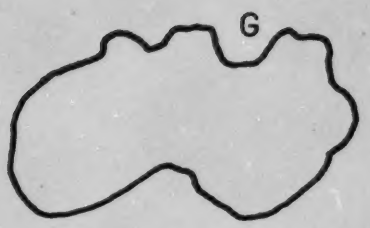


UNIT 5

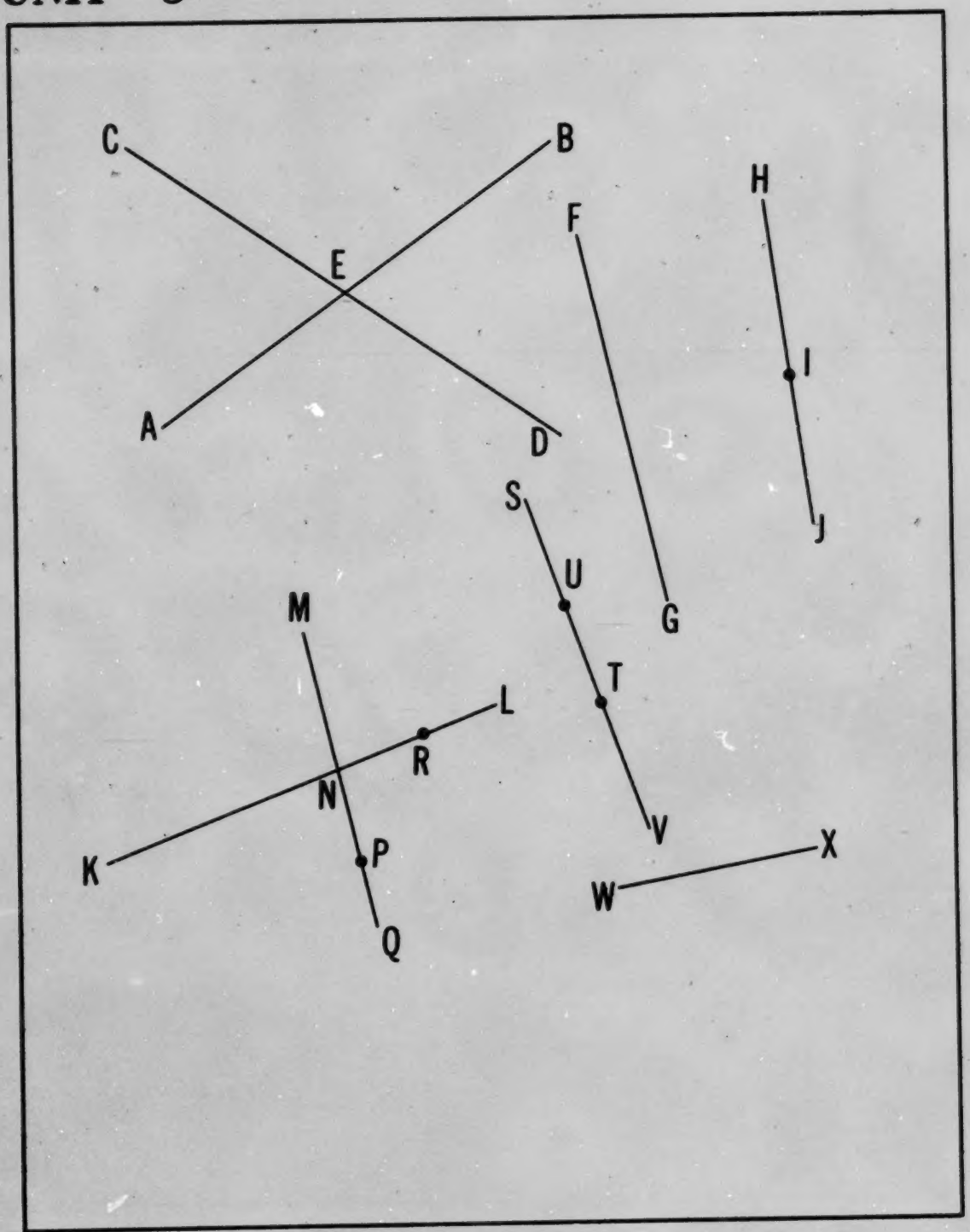


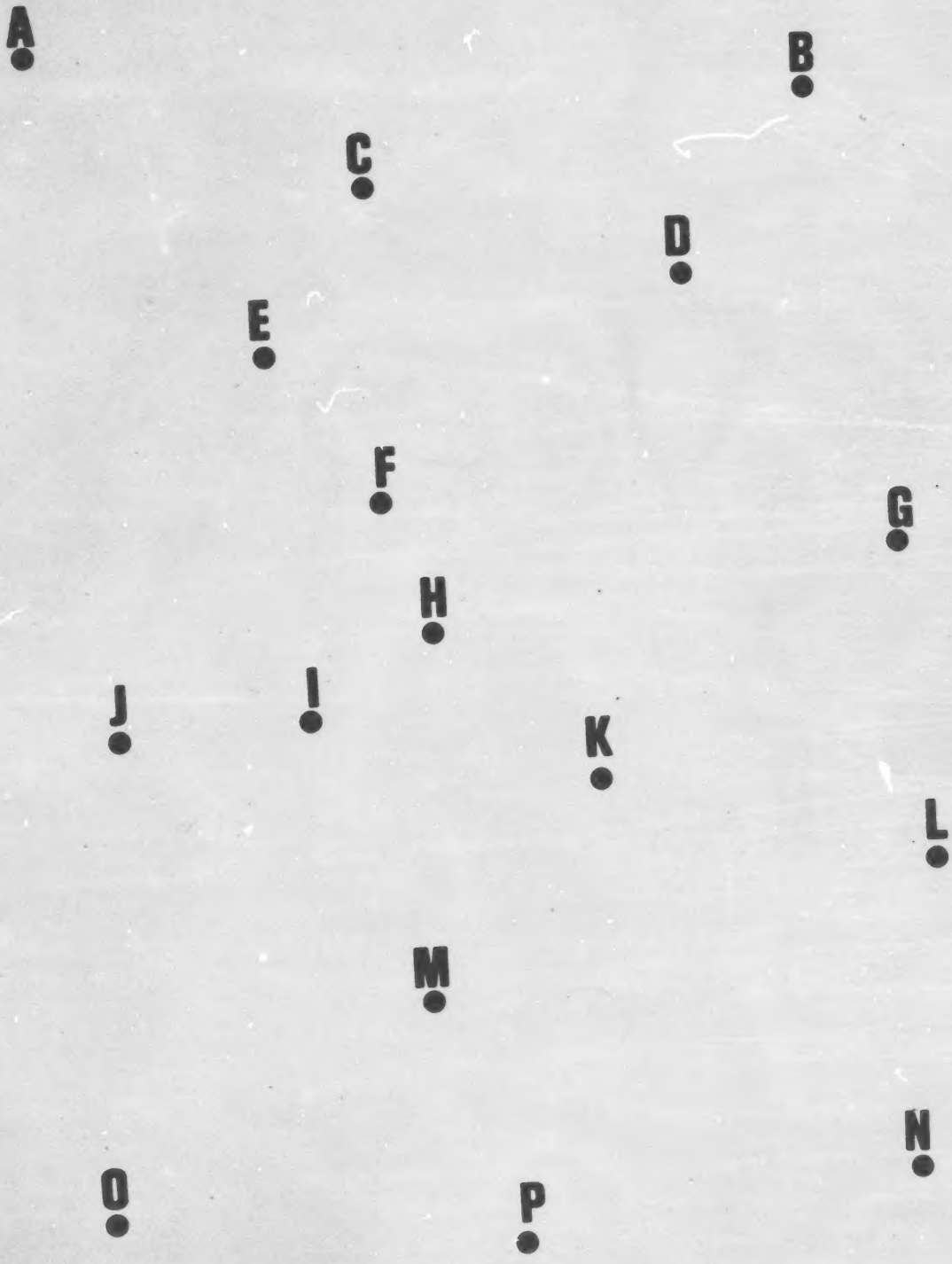






UNIT 5

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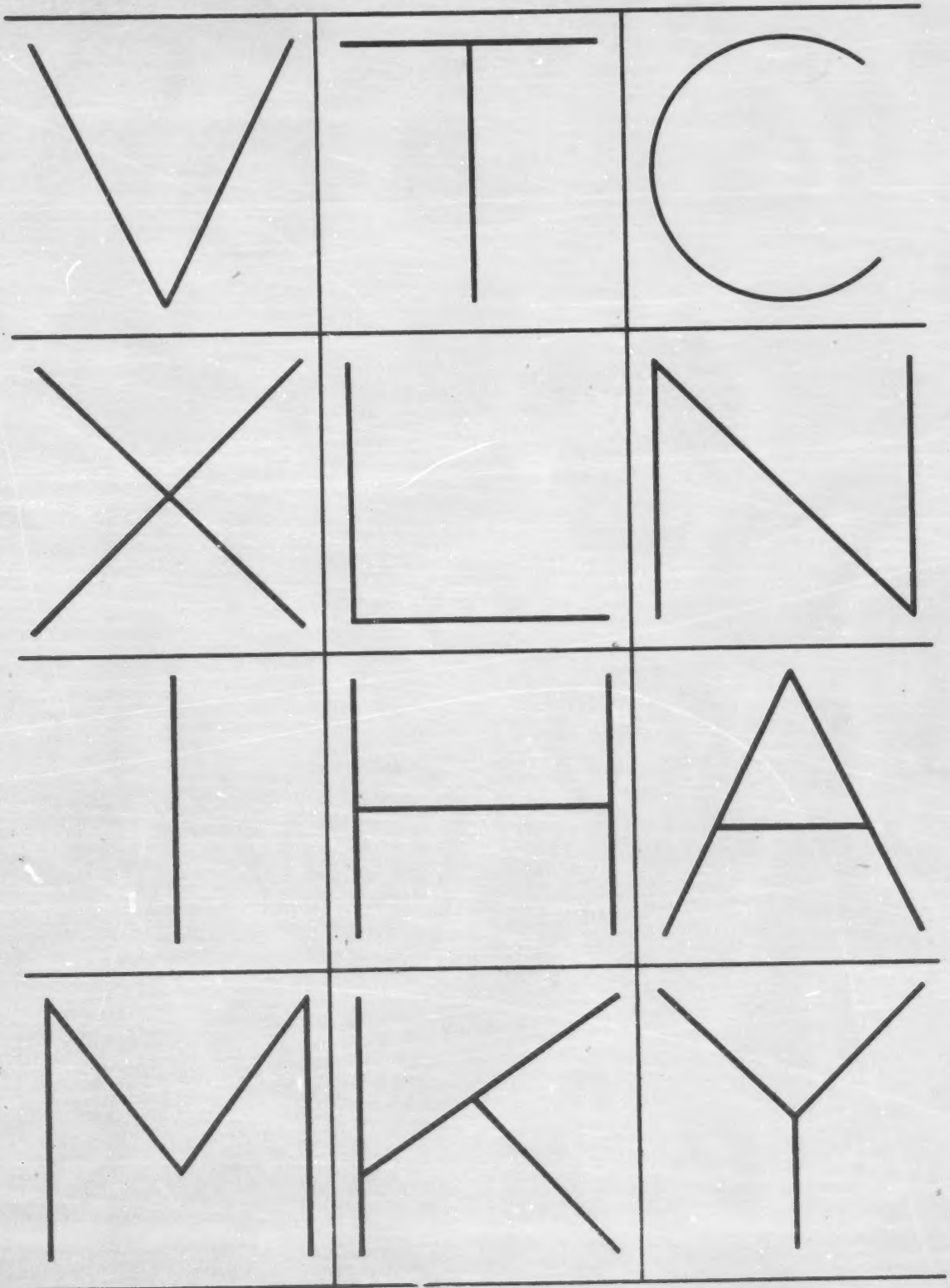
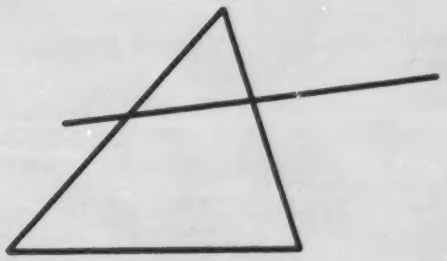
UNIT 5

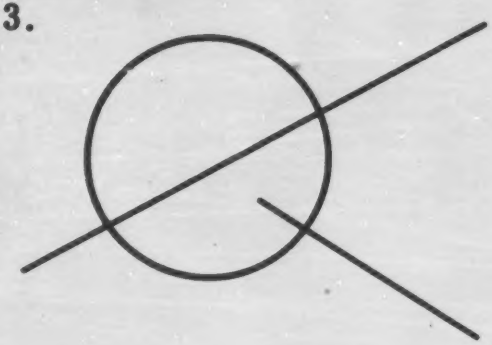


1.

2.



3.



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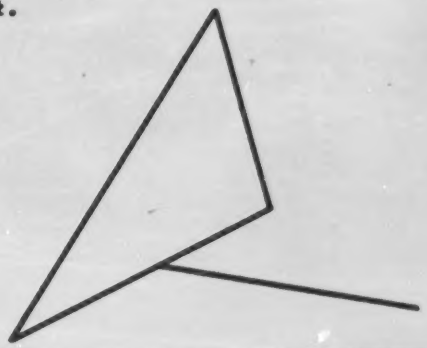
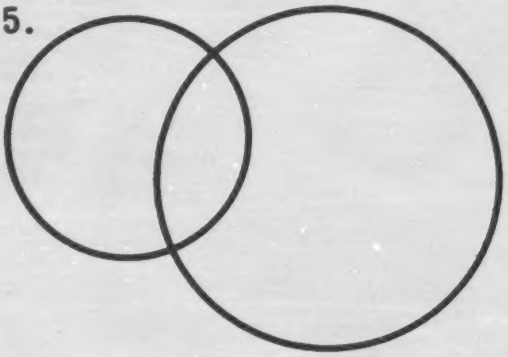


5.



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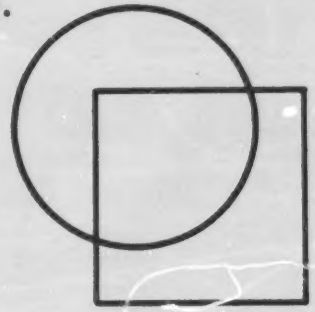

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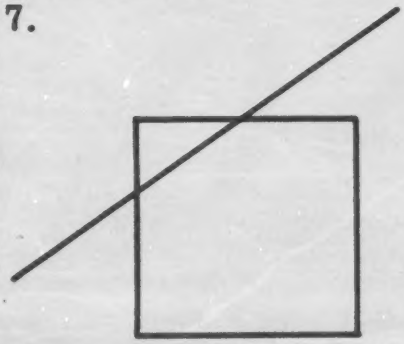

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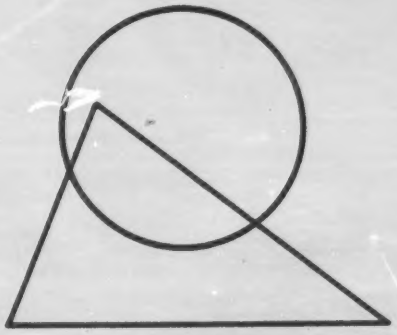


UNIT 5

a) _____

b) _____

c) _____

d) _____

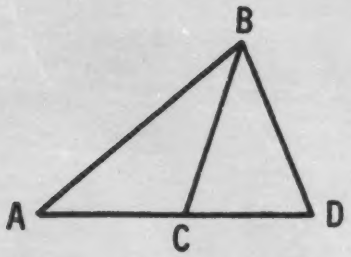
_____

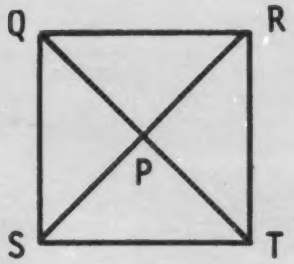
_____

_____

UNIT 5

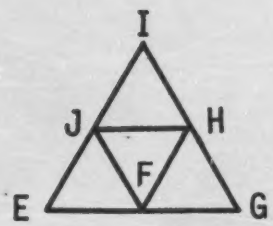
1. How many triangles are shown by these figures?

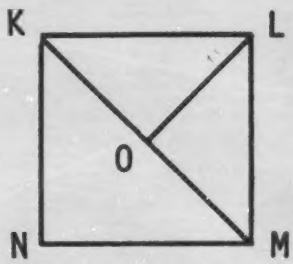




_____ _____

2. Name all the triangles in these figures.





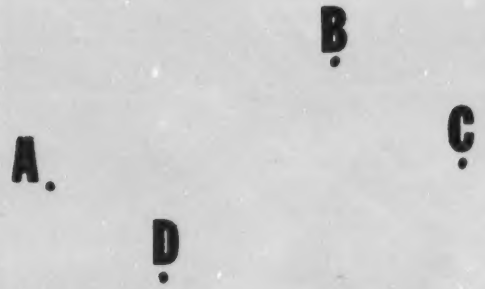
_____ _____ _____ _____ _____

_____ _____ _____ _____

3. Are there any triangles in this figure?

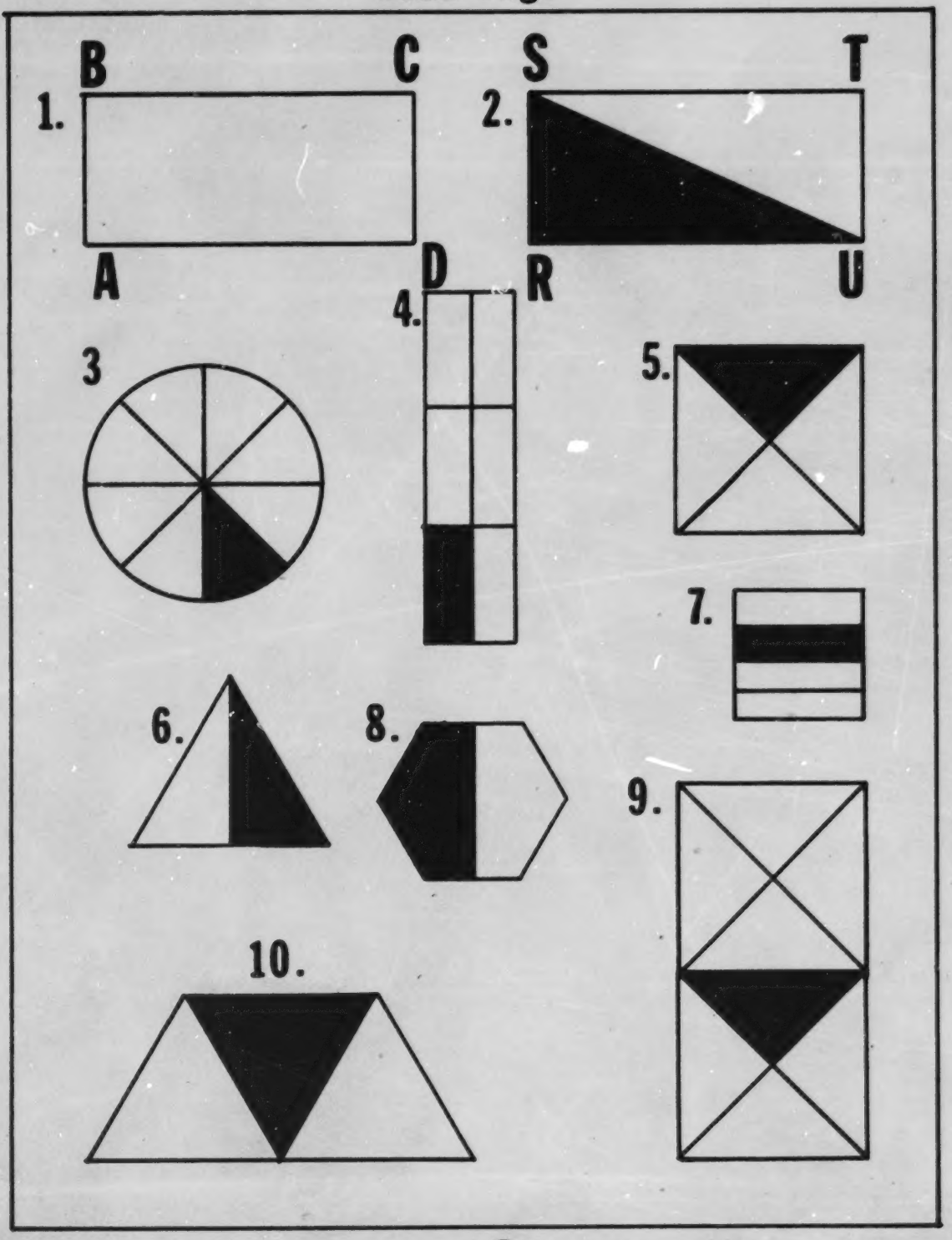
UNIT 5

1.



2.

3.


B
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1.
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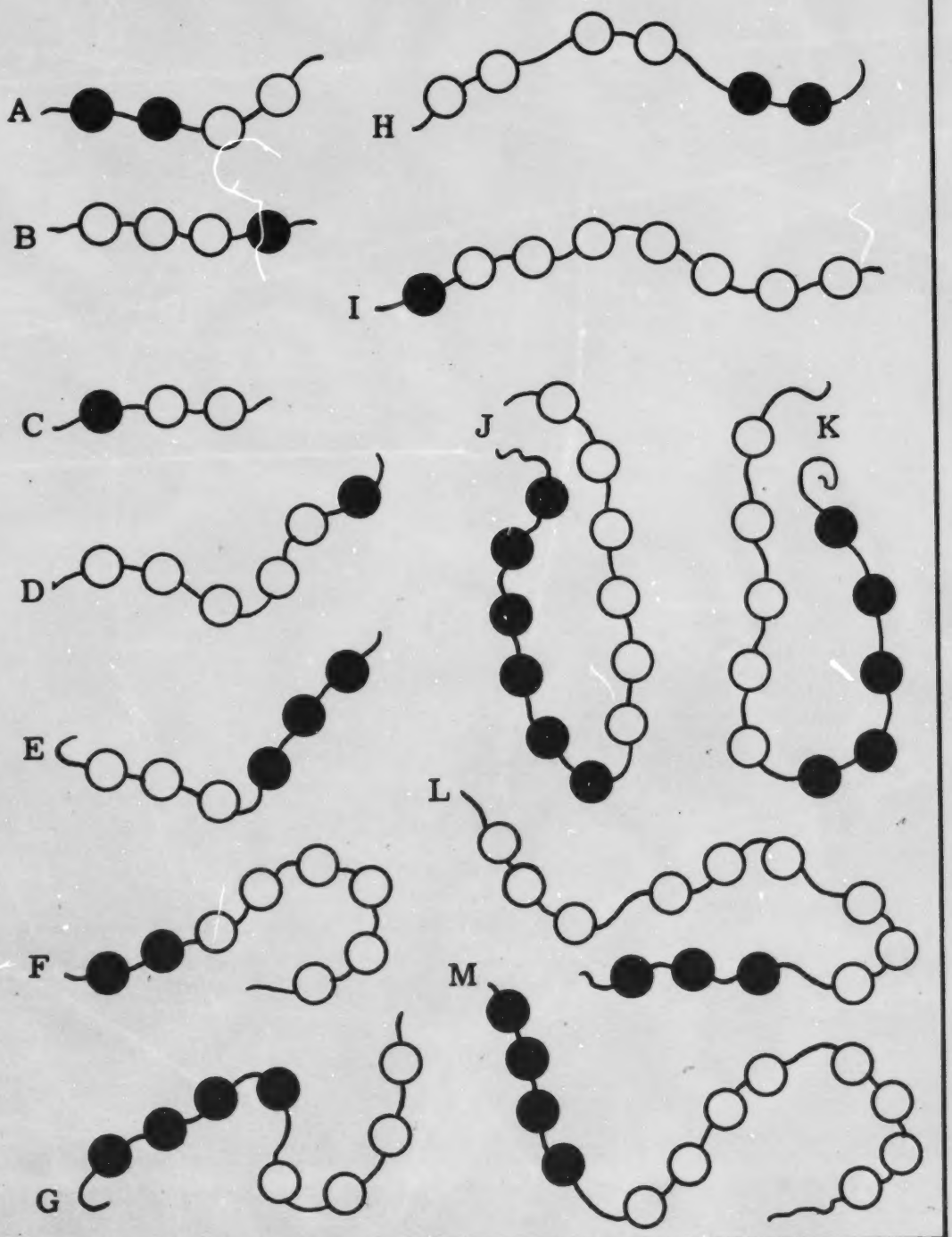
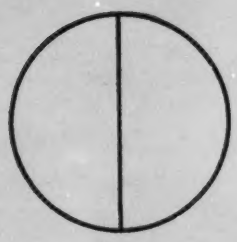
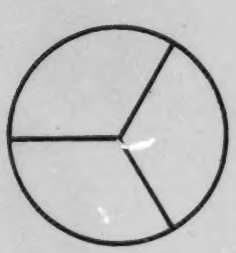
8.
9.
10.

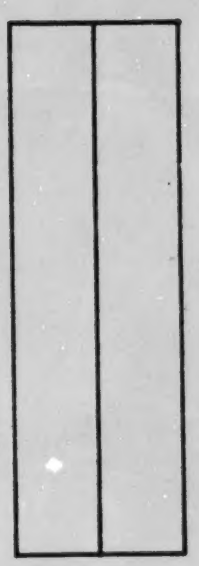
UNIT 6

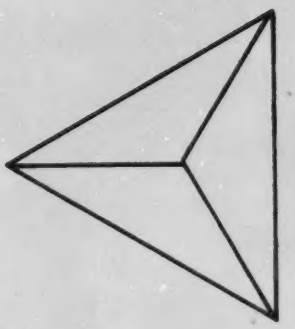
What part of the whole set is the subset of black beads?

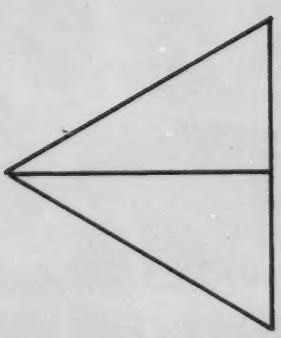




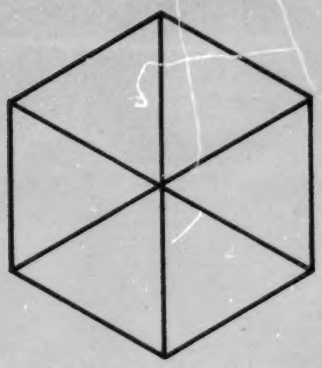


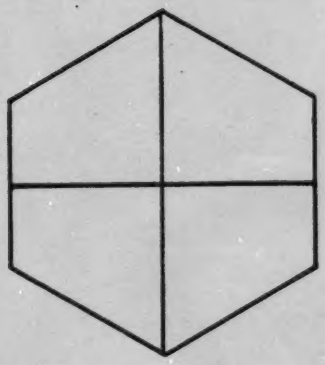


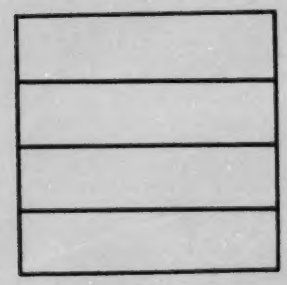


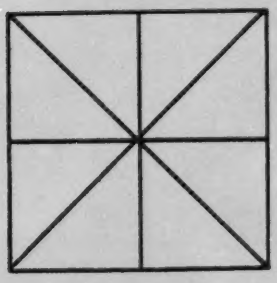


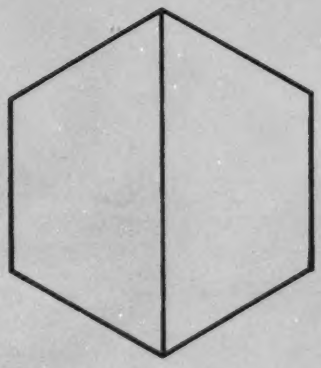
UNIT 6

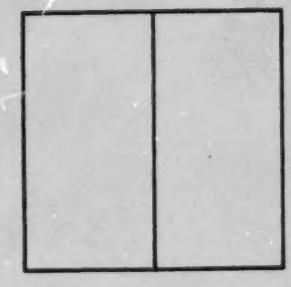


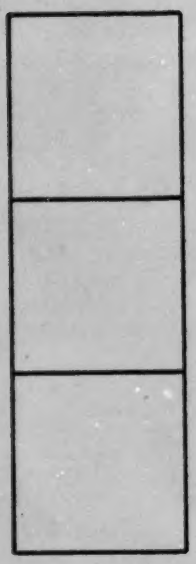


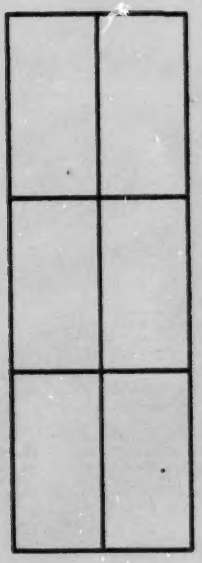


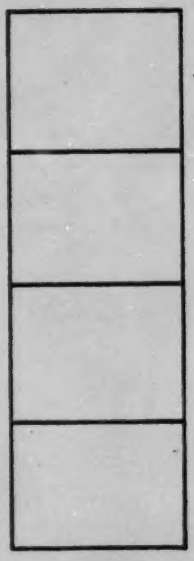


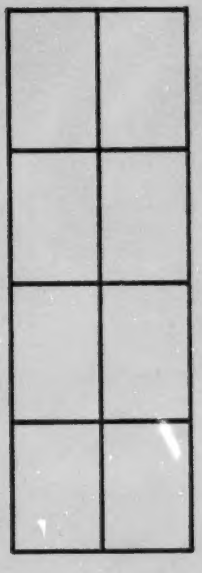












UNIT 6

Which number is greater?
Which number is less?
Which numbers are equal?
Make the sentences true.

1. $\frac{1}{3}$ _____ $\frac{1}{6}$

2. $\frac{1}{3}$ _____ $\frac{1}{2}$

3. $\frac{1}{2}$ _____ $\frac{1}{2}$

4. $\frac{1}{8}$ _____ $\frac{1}{8}$

5. $\frac{1}{4}$ _____ $\frac{1}{6}$

6. $\frac{1}{4}$ _____ $\frac{1}{8}$

7. $\frac{1}{2}$ _____ $\frac{1}{3}$

8. $\frac{1}{4}$ _____ $\frac{1}{3}$

9. $\frac{1}{6}$ _____ $\frac{1}{3}$

10. $\frac{1}{3}$ _____ $\frac{1}{3}$

11. $\frac{1}{6}$ _____ $\frac{1}{4}$

12. $\frac{1}{8}$ _____ $\frac{1}{4}$

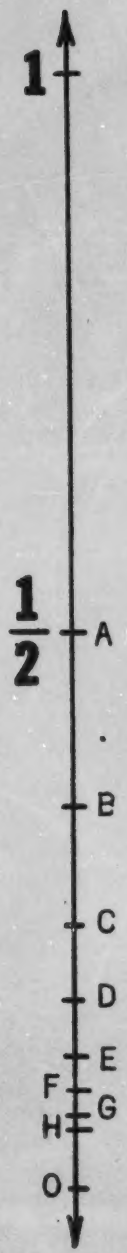
13. $\frac{1}{4}$ _____ $\frac{1}{2}$

14. $\frac{1}{8}$ _____ $\frac{1}{6}$

15. $\frac{1}{8}$ _____ $\frac{1}{3}$

16. $\frac{1}{2}$ _____ $\frac{1}{4}$

Name the points on the number line.



Point A: ☐ . $\frac{1}{3} <$ ☐

Point B: ☐ . $\frac{1}{12} <$ ☐ $< \frac{1}{8}$

Point C: ☐ .

Point D: ☐ . $\frac{1}{2} <$ ☐

Point E: ☐ . $\frac{1}{4} >$ ☐

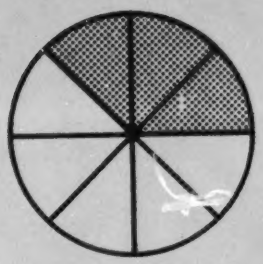
Point F: ☐ .

Point G: ☐ . $\frac{1}{3} >$ ☐ $> \frac{1}{8}$

Point H: ☐ . $\frac{1}{12} <$ ☐

UNIT 6

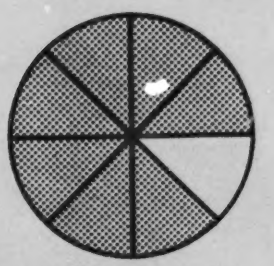
Fill in the blanks.

A 

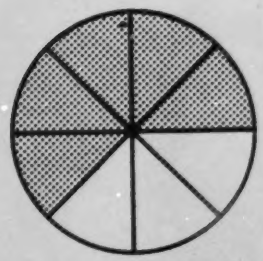
The shaded region of A shows_____.

B

The shaded region of B shows_____.

C 

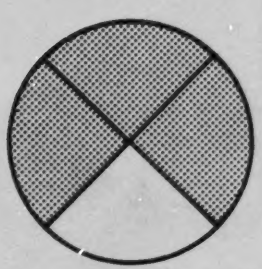
The shaded region of C shows_____.

D 

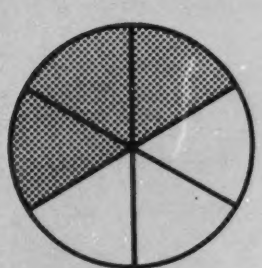
The shaded region of D shows_____.

E

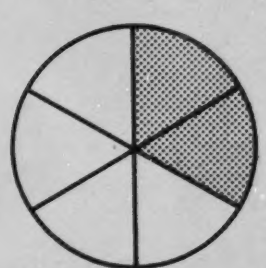
The shaded region of E shows_____.

F 

The shaded region of F shows_____.

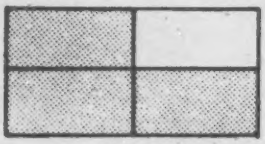
G 

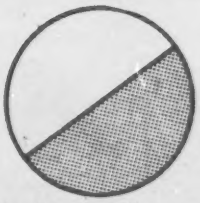
The shaded region of G shows_____.

H 

The shaded region of H shows_____.

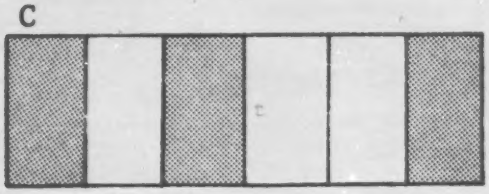
What fraction completes the statement?

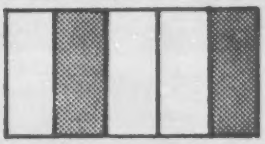
A 

B 

1. The shaded region of A shows ____ of the region.

2. The shaded region of B shows ____ of the region.

C 

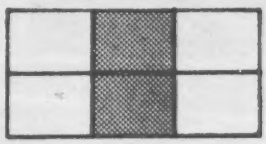
D 

3. The unshaded region of C shows ____ of the region.

4. The shaded region of D shows ____ of the region.

5. The unshaded region of D shows ____ of the region.

E

F 

6. The unshaded region of E shows _____ of the region.

7. The shaded region of E shows ____ of the region.

8. The shaded region of F shows _____ of the region.

9. The unshaded region of F shows ____ of the region.

---

10. You used the number 3/4 in (1). What other numbers did you use on this page? _____

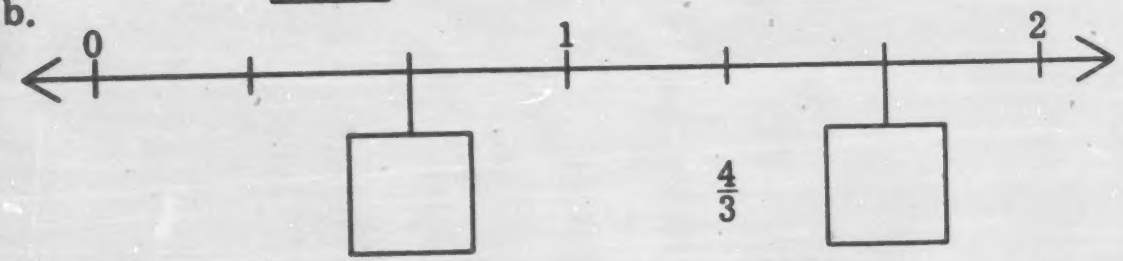
11. What do we call numbers like these? _____

UNIT 6

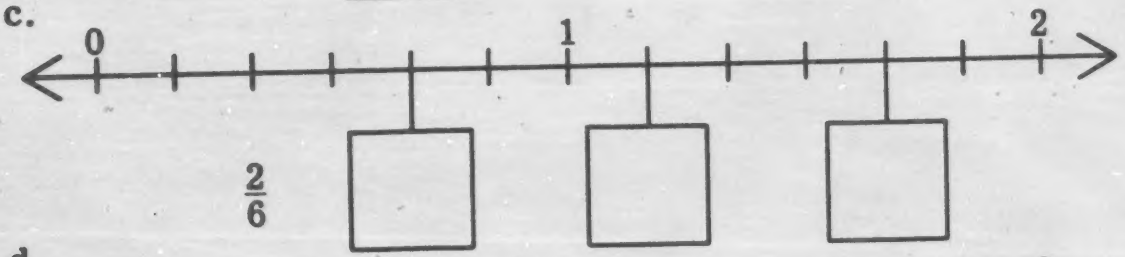
Fill in the boxes.

a.

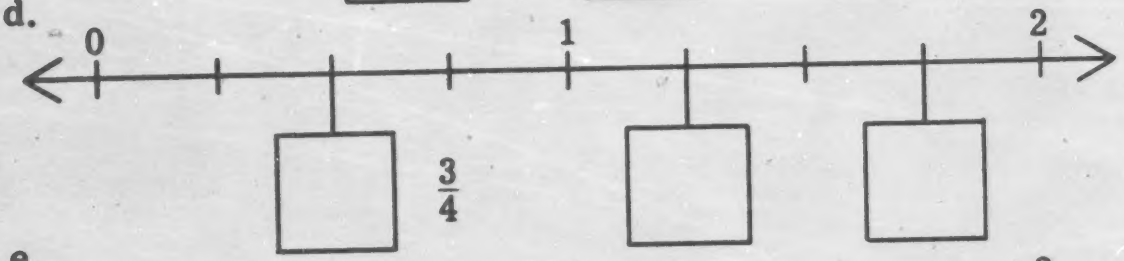
b.



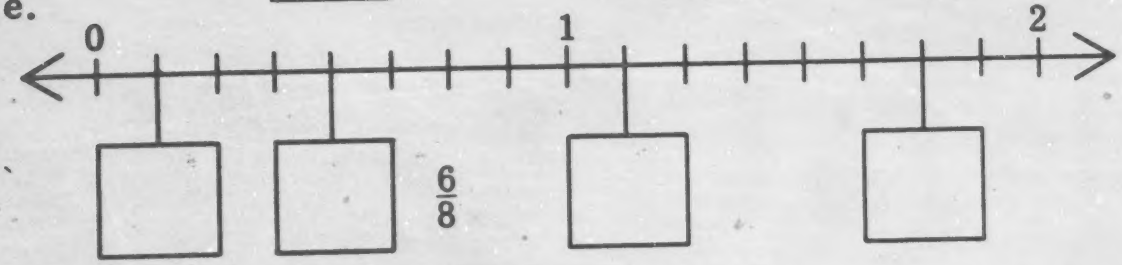
c.



d.



e.



UNIT 6

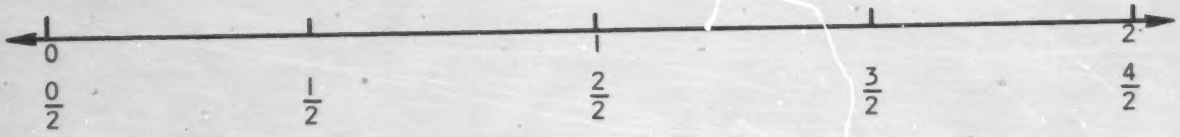
What is another name for each of these numbers?
(Some answers may vary.)

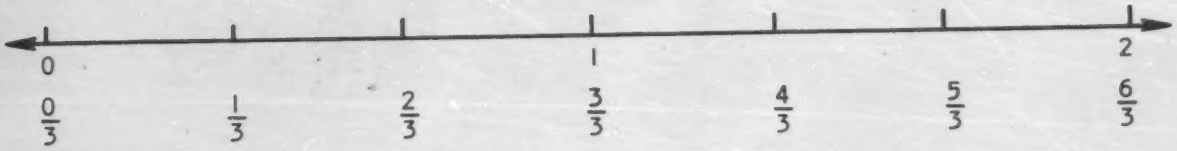
1. $\frac{1}{3}$ = _____
2. $\frac{1}{4}$ = _____
3. $\frac{1}{2}$ = _____
4. $\frac{4}{2}$ = _____
5. $\frac{6}{8}$ = _____
6. $\frac{3}{4}$ = _____
7. $\frac{3}{6}$ = _____
8. $\frac{2}{3}$ = _____
9. $\frac{5}{5}$ = _____
10. $\frac{2}{8}$ = _____
11. $\frac{2}{4}$ = _____
12. $\frac{8}{4}$ = _____
13. $\frac{3}{2}$ = _____
14. $\frac{4}{6}$ = _____
15. $\frac{6}{4}$ = _____

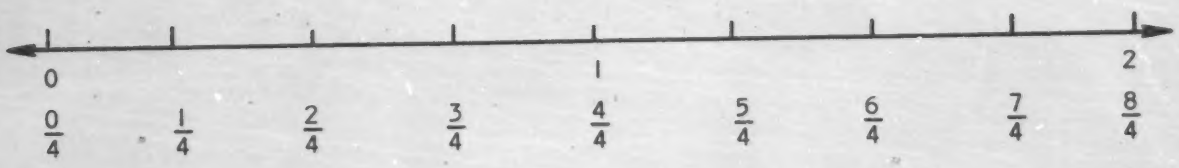
Make a true sentence by writing one of these symbols: =, > or < .

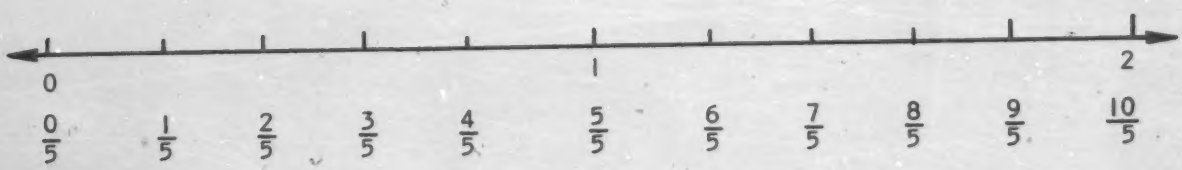
16. $\frac{3}{4}$ _____ $\frac{1}{8}$
17. $\frac{10}{6}$ _____ $\frac{5}{3}$
18. $\frac{5}{6}$ _____ $\frac{7}{8}$
19. $\frac{2}{3}$ _____ $\frac{4}{8}$
20. $\frac{5}{4}$ _____ $\frac{10}{8}$
21. $\frac{1}{2}$ _____ $\frac{4}{8}$
22. $\frac{8}{6}$ _____ $\frac{4}{3}$
23. $\frac{8}{4}$ _____ $\frac{4}{3}$
24. $\frac{1}{3}$ _____ $\frac{3}{8}$
25. $\frac{6}{8}$ _____ $\frac{3}{4}$
26. $\frac{7}{5}$ _____ $\frac{4}{5}$
27. $\frac{4}{3}$ _____ $\frac{3}{4}$

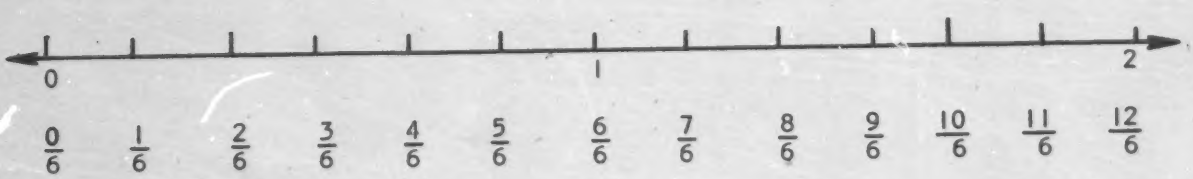
UNIT 6

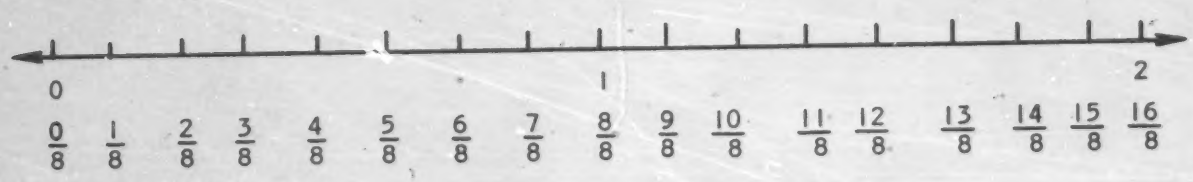

0
1
2
$\frac{0}{2}$ $\frac{1}{2}$ $\frac{2}{2}$ $\frac{3}{2}$ $\frac{4}{2}$


0
1
2
$\frac{0}{3}$ $\frac{1}{3}$ $\frac{2}{3}$ $\frac{3}{3}$ $\frac{4}{3}$ $\frac{5}{3}$ $\frac{6}{3}$


0
1
2
$\frac{0}{4}$ $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ $\frac{4}{4}$ $\frac{5}{4}$ $\frac{6}{4}$ $\frac{7}{4}$ $\frac{8}{4}$


0
1
2
$\frac{0}{5}$ $\frac{1}{5}$ $\frac{2}{5}$ $\frac{3}{5}$ $\frac{4}{5}$ $\frac{5}{5}$ $\frac{6}{5}$ $\frac{7}{5}$ $\frac{8}{5}$ $\frac{9}{5}$ $\frac{10}{5}$


0
1
2
$\frac{0}{6}$ $\frac{1}{6}$ $\frac{2}{6}$ $\frac{3}{6}$ $\frac{4}{6}$ $\frac{5}{6}$ $\frac{6}{6}$ $\frac{7}{6}$ $\frac{8}{6}$ $\frac{9}{6}$ $\frac{10}{6}$ $\frac{11}{6}$ $\frac{12}{6}$


0
1
2
$\frac{0}{8}$ $\frac{1}{8}$ $\frac{2}{8}$ $\frac{3}{8}$ $\frac{4}{8}$ $\frac{5}{8}$ $\frac{6}{8}$ $\frac{7}{8}$ $\frac{8}{8}$ $\frac{9}{8}$ $\frac{10}{8}$ $\frac{11}{8}$ $\frac{12}{8}$ $\frac{13}{8}$ $\frac{14}{8}$ $\frac{15}{8}$ $\frac{16}{8}$

UNIT 6

Fill in the blanks.

1. $\frac{3}{4} = \frac{3 \times 2}{4 \times 2} = \frac{6}{8}$

2. $\frac{1}{2} = \frac{1 \times 4}{2 \times 4} =$ _____

3. $\frac{2}{3} = \frac{2 \times 4}{3 \times 4} =$ _____

4. $\frac{1}{2} = \frac{1 \times 3}{2 \times 3} =$ _____

5. $\frac{5}{6} = \frac{5 \times 2}{6 \times 2} =$ _____

6. $\frac{4}{6} = \frac{4 \times \square}{6 \times \square} = \frac{8}{12}$

7. $\frac{2}{3} = \frac{2 \times \square}{3 \times 2} =$ _____

8. $\frac{3}{4} = \frac{3 \times \square}{4 \times \square} =$ _____

UNIT 6

Write another name for the numeral.

1. $\frac{5}{10}$ = _____

2. $\frac{6}{8}$ = _____

3. $\frac{3}{5}$ = _____

4. $\frac{7}{12}$ = _____

5. $\frac{3}{8}$ = _____

6. $\frac{8}{4}$ = _____

7. $\frac{4}{7}$ = _____

8. $\frac{2}{6}$ = _____

9. $\frac{8}{10}$ = _____

10. $\frac{7}{8}$ = _____

11. $\frac{5}{5}$ = _____

12. $\frac{3}{4}$ = _____

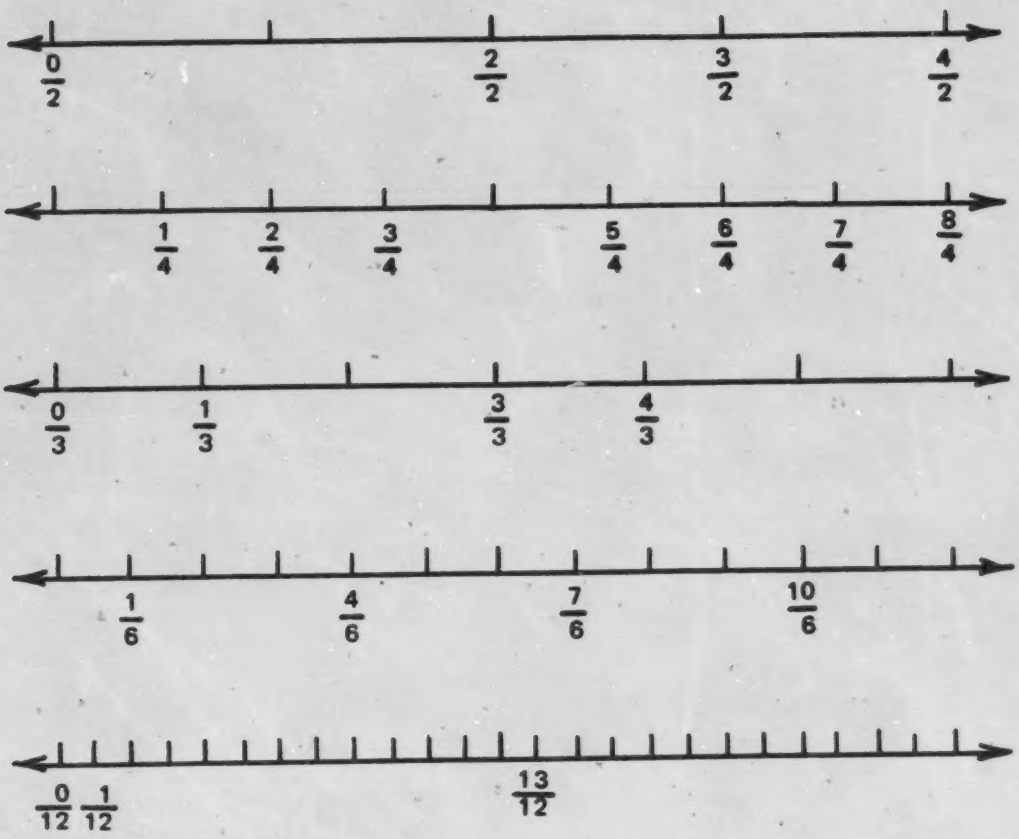
13. $\frac{5}{9}$ = _____

14. $\frac{3}{7}$ = _____

15. $\frac{5}{6}$ = _____

16. $\frac{1}{8}$ = _____

Find the missing numbers for the points on the number lines shown below.



Study the number lines above.

6. What names do you find for two-fourths? _____

7. Did you choose $\frac{1}{2}$ as a name for two-fourths? _____

8. What is the more common name used on the number line for three-thirds? _____

9. Did you choose the whole number name as the more common name? _____

UNIT 6

CHALLENGE PROBLEMS

Can you find the counting pattern we used?

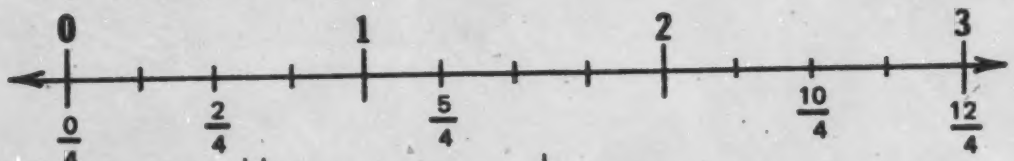
1. $\frac{0}{3}, \frac{2}{3}, \frac{4}{3}, ___, ___.$

2. $\frac{1}{5}, \frac{4}{5}, \frac{7}{5}, ___, ___.$

3. $\frac{0}{6}, \frac{3}{6}, \frac{6}{6}, ___, ___.$

4. $\frac{11}{4}, \frac{9}{4}, \frac{7}{4}, ___, ___.$

5. Supply the missing numbers for the points on the number line below:



6. Begin at $\frac{11}{4}$ and count by $\frac{1}{4}$'s to 4. Write the name for each number you use.

7. Begin at 0 and skip count by three-fourths to 3. Write a name for each number you use.

8. Begin at 3 and skip count backwards by two-fourths to 0. Write a name for each number you use.

Techniques of Addition & Subtraction of Whole Numbers *UNIT 7*

Find the missing number.

1. $\begin{array}{r} 63 \\ +\ 65 \\ \hline \end{array}$

2. $\begin{array}{r} 23 \\ +\ 71 \\ \hline \end{array}$

3. $\begin{array}{r} 51 \\ +\ 58 \\ \hline \end{array}$

4. $\begin{array}{r} 64 \\ +\ 53 \\ \hline \end{array}$

5. $\begin{array}{r} 84 \\ +\ 2 \\ \hline \end{array}$

6. $\begin{array}{r} 60 \\ -\ 40 \\ \hline \end{array}$

7. $\begin{array}{r} 4 \\ +\ 75 \\ \hline \end{array}$

8. $\begin{array}{r} 93 \\ +\ 36 \\ \hline \end{array}$

9. Mr. Moon has 83 bags of seeds. Mr. Walker has 32 bags of seeds. How many bags of seeds do they have together? _____

10. What is the sum of ninety-one and ninety-four? _____

11. What is 21 plus 86? _____

12. 72 + 31 = n _____

13. 11 + 91 = p _____

14. 84 - 64 = s _____

15. n = 53 + 83 _____

UNIT 7

Supplementary Page

Find the missing numbers.

1.
$$\begin{array}{r} 37 \\ +\ 42 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 41 \\ +\ 85 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 49 \\ +\ 90 \\ \hline \end{array}$$

4. I have 16 books. My sister has 12 more books than I have. How many books does my sister have? _____

5. 83 + 25 = _____

6. 22 + 92 = _____

7. 70 - 30 = _____

8.
$$\begin{array}{r} 63 \\ +\ 45 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 30 \\ +\ 90 \\ \hline \end{array}$$

10. In a school there are 86 boys and 53 girls. How many pupils are in the school? _____

11. Tommy planted 24 flowers on Tuesday. He planted 35 flowers on Wednesday. How many flowers did he plant on both days? _____

UNIT 7

Supplementary Page

Write the missing numbers.

1. $72 + 97 = y$ _____

2. $m = 92 + 66$ _____

3. $65 + 74 =$ _____

4. $k = 32 + 84$ _____

5. $100 - 50 = n$ _____

6. _____ $= 85 + 72$

7. $300 + 200$

8. $542 + 347$

9. $456 + 123$

10. $602 + 151$

11. $431 + 241$

12. $700 - 400$

13. $132 + 812$

14. $495 + 501$

15. $863 - 863$

16. $728 + 261$

17. $343 + 635$

18. $706 + 182$

19. $231 + 534$

20. $125 + 730$

21. $500 + 500$

22. $121 + 246$

UNIT 7

Write the missing numbers.

1. 3 4 + 2	2. 9 5 + 4	3. 40 10 + 30	4. 85 30 + 20	5. 90 7 + 82
6. 41 17 + 60	7. 35 92 + 50	8. 82 34 + 53	9. 400 800 + 500	10. 425 3 + 61

11. Elias has 9 books, Samuel has 8 books and Dominic has 7 books. How many books do they have altogether?

_____

12. Toni has 41 beads, Mary has 20 beads and Edith has 47 beads. How many beads do they have altogether?

_____

Make the sentences true.

13. 45 + 53 + 71 = n _____

14. 24 + 23 + 61 = g _____

15. s = 21 + 33 + 53 _____

16. 54 + 82 + 43 = y _____

17. z = 32 + 42 + 32 _____

UNIT 7

Supplementary Page

Add.

1. 76
21
+ 12

2. 83
34
+ 62

3. 62
74
+ 31

4. 92
63
+ 44

5. 41
57
+ 41

6. 46
61
+ 41

7. 85
41
+ 41

8. 41
93
+ 65

9. 42
51
+ 51

UNIT 7

Supplementary Page

Find the missing numbers.

1.
$$\begin{array}{r} 11 \\ 31 \\ +\ 21 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 41 \\ 1 \\ +\ 32 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 21 \\ 3 \\ +\ 61 \\ \hline \end{array}$$

4. A father gave his daughter 30 cents to buy food at school, 25 cents to buy paper; and 10 cents for bus fare. How many cents did the father give his daughter? _____

5.
$$\begin{array}{r} 21 \\ 23 \\ +\ 5 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 3 \\ 61 \\ +\ 14 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 51 \\ 14 \\ +\ 33 \\ \hline \end{array}$$

8. Three fishermen went to catch fish at the river. One caught 3 fish, another caught 4 fish and the other caught 2 fish. How many fish did they catch?

_____

9. I bought a pair of shoes for 14 dollars, pants for 12 dollars and a coat for 42 dollars. How many dollars did I spend? _____

UNIT 7

Rename and add.

Example: $45 + 47 = n$

$n = 92$

$$\begin{array}{r} 45 \\ +\ 47 \\ \hline 92 \end{array}$$

$$\begin{array}{r} 40 + 5 \\ 40 + 7 \\ \hline 80 + 12 \\ 80 + 10 + 2 \\ 92 \end{array}$$

1. $45 + 24 = n$

   n is _____

2. $53 + 32 = a$

   a is _____

3. $67 + 14 = m$

   m is _____

4. $96 + 33 = d$

   d is _____

5. $27 + 85 + 43 = p$

   p is _____

6. $46 + 27 + 31 = g$

   g is _____

UNIT 7

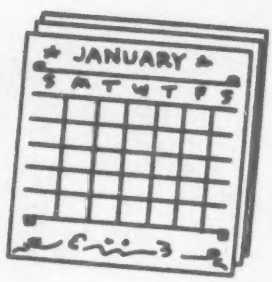
7. Henry played football at school for 65 minutes. Then he took 32 minutes to walk home. How many minutes did he take to play football and walk home?

_____

8. Tom has 67 cows. Bill has 29 cows and Jim has 85 cows. How many cows do they have altogether? _____

9. In one town 532 babies were born in 1960, 604 babies in 1961, and 977 babies in 1962. How many babies were born in three years? _____

10. How many days are there in the first three months of the year, if February has 28 days? _____



11. The monthly pay-checks of three men are 270 dollars, 147 dollars, and 665 dollars. Find the total number of dollars paid in one month to the three men.

_____

Add.

1. 53 + 16 = c

2. 68 + 28 = m

3. 348 + 151 = a

4. 282 + 509 = n

5. 256 + 130 + 613 = n

6. 876 + 235 + 544 = m

UNIT 7

Find the missing numbers.

1.	2.	3.	4.	5.
32	63	25	59	17
+ 48	+ 19	+ 68	+ 48	- 9

6. Mr. Black has 28 cows and Mr. Newton has 36 cows. How many cows do they have together? _____

7. Mr. Green counted 18 girls and 24 boys in his classroom. How many pupils are in Mr. Green's classroom? _____

8.	9.	10.	11.	12.
38	57	60	57	79
+ 63	+ 29	- 40	+ 58	- 49

13.	14.	15.	16.	17.
58	69	47	29	28
+ 79	+ 56	+ 96	+ 2	+ 84

Write the missing numerals.

18. 221 + 129 = _____

19. 379 + 413 = _____

20. _____ = 117 + 353

UNIT 7

Find the missing numbers.

1. 618 + 158

2. 159 + 769

3. 206 + 394

4. 681 - 100

5. 176 + 234 + 258

6. 521 + 372 + 84

7. 400 + 87 + 238

8. 903 + 5 + 92

Mr. Hill counted 203 birds in the park today. Yesterday he counted 195. How many birds did he count in all?

_____

9. 1345 + 1205

10. 1309 + 2408

11. 8327 + 1576

12. 1448 + 3245

Make the sentences true.

13. 2166 + 2362 = n _____

14. 4721 + 1723 = b _____

14. 3052 + 1075 = m _____

16. 3868 + 3673 = y _____

UNIT 7

Supplementary Page

What number makes the sentence true?

1. n = 342 + 576 + 409

$$\begin{array}{r} 342 \\ 576 \\ +\ 409 \\ \hline \end{array}$$

n is _____.

2. p = 1246 + 2590 + 178

$$\begin{array}{r} 1246 \\ 2590 \\ +\ 178 \\ \hline \end{array}$$

p is _____.

3. 1384 + 728 + 1589 = g

$$\begin{array}{r} 1384 \\ 728 \\ +\ 1589 \\ \hline \end{array}$$

g is _____.

4. 528 + 962 + 403 = a

$$\begin{array}{r} 528 \\ 962 \\ +\ 403 \\ \hline \end{array}$$

a is _____.

5. m = 1846 - 702

$$\begin{array}{r} 1846 \\ -\ 702 \\ \hline \end{array}$$

m is _____.

6. b = 943 + 708 + 876

$$\begin{array}{r} 943 \\ 708 \\ +\ 876 \\ \hline \end{array}$$

b is _____.

7. There are 256 pupils in Alamo School, 325 pupils in George School and 176 in Crockett School. In all these schools there are _____ pupils.

UNIT 7

Make the sentences true.

1. $n = 426 + 300 + 1245$

$$\begin{array}{r} 426 \\ 300 \\ +\ 1245 \\ \hline \end{array}$$

n is _____.

2. $p = 7245 + 3596$

$$\begin{array}{r} 7245 \\ +\ 3596 \\ \hline \end{array}$$

p is _____.

3. $75 + 128 + 802 = m$

$$\begin{array}{r} 75 \\ 128 \\ +\ 802 \\ \hline \end{array}$$

m is _____.

4. $p = 1245 - 123$

$$\begin{array}{r} 1245 \\ -\ 123 \\ \hline \end{array}$$

p is _____.

5. A farmer owned 925 sheep. He sold 502 of them. He said, "I now own _____ sheep."

6. Larry read three books. The first had 728 pages. The second had 413 pages. The third book had 548. He said, "I have read all the _____ pages of the three books."

UNIT 7

Find the missing numbers.

Example: $36 + 57 = d$

$93 = d$

d is 93

$$\begin{array}{r} 36 \\ +\ 57 \\ \hline 93 \end{array}$$

1. $67 + 84 = m$

2. $134 + 29 = n$

3. $257 + 84 + 489 = m$

4. $3782 + 3665 + 555 = n$

5. $126 + 67 + 1148 = d$

6. $323 + 612 = d$

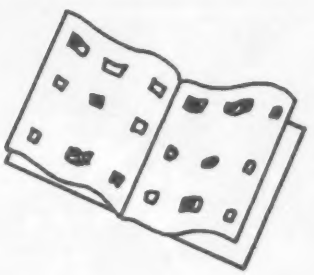
7. One fishing boat carried 687 fish, a second boat carried 490 fish, and a third boat carried 600 fish. Find the total number of fish which were carried by the three fishing boats. _____

8. Mary read a book in two days. She read 196 pages the first day and 205 pages the second day. How many pages are in the book? _____

9. In three days an airplane flew 3286 miles, 3078 miles, and 5000 miles. How many miles did it fly in the three days? _____

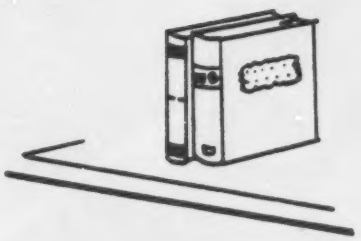
10. Bill collected 59 stamps. His sister collected 74 stamps. How many stamps did they collect together?

_____



UNIT 7

11. The city council gave three schools some library books. The first school got 347 books, the second 897 books, and the third 304 books. How many books were given to the three schools?



_____

12. Tom wants to buy a book. He has 75 cents. He needs 50 cents more. What is the cost of the book?

_____

UNIT 7

Supplementary Page

What number makes the sentence true?

1. $\begin{array}{r} 32 \\ 571 \\ +\ 349 \\ \hline \end{array}$

2. $\begin{array}{r} 1079 \\ 345 \\ +\ 761 \\ \hline \end{array}$

3. $\begin{array}{r} 2174 \\ 1035 \\ 437 \\ +\ 211 \\ \hline \end{array}$

4. In the National Park, Bob saw 375 buffaloes, 472 birds, and 139 bears. How many animals did he see altogether?

_____

5. Bill picked 79 coconuts one day, 135 coconuts the second day, and 119 coconuts the third day. How many coconuts did he pick in the three days?

_____

6. $35 + m = 174$

7. $349 + 475 = g$

8. $p = 1473 + 279$

9. $129 + n = 245$

10. $s + 74 = 217$

11. $b = 476 + 1297 + 345$

UNIT 7

Find the missing numbers.

1. $\begin{array}{r} 495 \\ +\ A7B \\ \hline 871 \end{array}$

   B is ____.

   A is ____.

2. $\begin{array}{r} 3N5 \\ +\ 492 \\ \hline 86N \end{array}$

   N is ____.

3. $\begin{array}{r} 78E \\ +\ E59 \\ \hline 12E3 \end{array}$

   E is ____.

4. $\begin{array}{r} 763 \\ +\ 49G \\ \hline 1HG8 \end{array}$

   G is ____.

   H is ____.

5. $\begin{array}{r} 1493 \\ +\ 2F8 \\ \hline 1F71 \end{array}$

   F is ____.

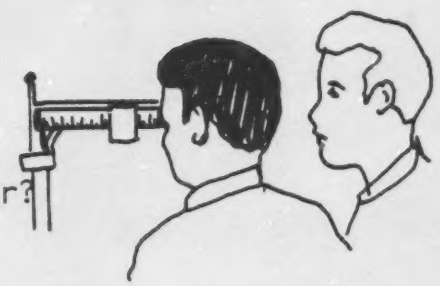
6. $\begin{array}{r} 93K \\ +\ 4P7 \\ \hline 1R22 \end{array}$

   K is ____.

   P is ____.

   R is ____.

7. Tom weighs 139 pounds, Bill weighs 156 pounds, and Bob weighs 147 pounds. How much do the children weigh altogether?



   _____

Find the sums.

8. $\begin{array}{r} 1473 \\ 527 \\ +\ 495 \\ \hline \end{array}$

9. $\begin{array}{r} 462 \\ 729 \\ +\ 1317 \\ \hline \end{array}$

10. $\begin{array}{r} 394 \\ 1287 \\ +\ 2729 \\ \hline \end{array}$

What is n?

1. $n = 2268 + 2376 + 3013$ _____

2. $6610 + 3462 + 2108 = n$ _____

3. $n = 833 + 7142 + 90 + 5134$ _____

4. $494 + 903 + 1363 = n$ _____

Find the sum.

5.
$$\begin{array}{r} 1234 \\ 5678 \\ 2016 \\ +\ 1002 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 932 \\ 1063 \\ 4300 \\ +\ 1762 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 7914 \\ 3008 \\ 5161 \\ +\ 2007 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 4176 \\ 5283 \\ +\ 9761 \\ \hline \end{array}$$

9. Abu's father bought four houses. The first house cost him 3352 pounds. The second cost him 3162 pounds, the third cost him 2876 pounds, and the fourth cost him 4708 pounds. What did the four houses cost altogether?

10. In a four-day sports meeting the daily attendances were: 2013, 3713, 4500, and 5400. How many people attended on the four days?

UNIT 7

Add.

1. A train carries four cars of oranges. The oranges in the first car weigh 3422 pounds, those in the second car weigh 3346 pounds, those in the third car weigh 4015 pounds, and those in the fourth car weigh 4203 pounds. What is the weight of the oranges in the four cars?

2. On Friday Keith slept for 623 minutes, on Saturday he slept for 613 minutes and on Sunday he slept for 695 minutes. Wilson slept for 509 minutes on Friday, for 703 minutes on Saturday, and for 725 minutes on Sunday.
Who slept longer for these three days? _____
How much longer did he sleep? _____

Find the sum.

3.
```
  14,000
   8,060
  22,009
+ 19,110
```

4.
```
 806,103
  80,700
   9,062
+  3,104
```

5.
```
  26,004
  13,462
  15,100
+ 19,711
```

Find the code.

6.
```
 400,P76
 N23,814
 200,001
+ 34,203
 858,194
```

P is _____.

N is _____.

7.
```
 175,3K2
 300,164
  1T,023
+ 100,F71
 589,820
```

K is _____.

F is _____.

T is _____.

8.
```
  86,314
  2W,423
  10,000
+ Y2,86X
  129,601
```

X is _____.

W is _____.

Y is _____.

UNIT 7

What number makes the sentence true?

1. a = 11284 + 9763 + 7188 + 987 + 765.

a is _____.

2. 15346 + 22134 + 29124 + 7162 = p.

p is _____.

3. 15632 + 189 + 4163 + 98 + 724[illegible] = q.

q is _____.

4. x = 18007 + 970 + 4638 + 75.

x is _____.

5. w = 817 + 72 + 1416 + 42100 + 716.

w is _____.

6. 900,000 + 620,000 + 876,469 + 130,019 + 78,325 = z.

z is _____.

UNIT 7

1. Tommy's town is a large one. They have four water tanks. The first tank holds 15,200 gallons, the second holds 22,147 gallons, the third holds 35,100 gallons, and the fourth holds 43,897 gallons. The four tanks together hold w gallons of water. What is w? _____

2. Henry's father is a fisherman. In May last year he caught 7246 fish. In June he caught 5876 fish. In July he caught 8314 fish. In August he caught 4713 fish, and in September he caught 6492 fish. He caught f fish in these five months. What is f?

_____

3. In one year a city council spent the following: 80,340 dollars on school buildings; 17,146 dollars on parks; 150,016 dollars on hospitals; 18,136 dollars on water; and 217,384 dollars on streets. Find how many dollars the council spent in all. _____

Supplementary Page

Find the missing numerals.

1. Robert decided to walk from City A to City B. He took five days. On the first day he walked 23,136 yards, on the second day he walked 20,864 yards, on the third day he walked 19,893 yards, on the fourth day he walked 20,106 yards, and on the fifth day he walked 21,242 yards. He walked d yards in all. What is d? _____

2. Five shops made paper flowers. The first shop made 19,260 flowers, the second shop made 16,486 flowers, the third made 8,243 flowers, the fourth one made 7,004 flowers, and the fifth shop made 12,415 flowers. The five shops made h flowers in all. What is h? _____

Add.

3.
```
  2389
  4751
  1604
  8237
+ 9062
```

4.
```
 14623
 21587
 46790
 30014
+ 8407
```

5.
```
 84762
   976
  1284
 18342
  2786
+  172
```

UNIT 7

Use the signs >, < and =.

1. 40 + 30 _____ 70
2. 42 + 35 _____ 75
3. 42 + 35 _____ 80
4. 143 + 30 _____ 200
5. 143 + 30 _____ 100
6. 400 + 200 _____ 600
7. 420 + 143 _____ 600
8. 800 + 735 _____ 1500
9. 52 + 59 _____ 100
10. 52 + 59 _____ 200
11. 20 + 40 + 60 _____ 1200
12. 25 + 42 + 68 _____ 1200
13. 125 + 302 + 181 _____ 600

Make the sentences true.

14. Ben has 12 books, Robert has 19 books, and Ralph has 31 books. The teacher said to the pupils, "This shelf holds 50 books. Put all of your books on the shelf." Ben said, "We _____ (can, can't) put the books on the shelf because 12 + 19 + 31 _____ (>, <) 50."

UNIT 7

Work the puzzles.

2		4
	5	
6		8

Sum: 15

	7	
1	5	9

15

Sum: 15

6		2
	5	
8		4

Sum: 15

	8	
6		2
	0	

Sum: 12

UNIT 7

Make the sentences true.

1. $85 - 32 = n$

$$\begin{array}{r} 85 \\ -\ 32 \\ \hline \end{array}$$

n is _____.

2. $423 - 122 = p$

$$\begin{array}{r} 423 \\ -\ 122 \\ \hline \end{array}$$

p is _____.

3. $743 + 38 = b$

$$\begin{array}{r} 743 \\ +\ 38 \\ \hline \end{array}$$

b is _____.

4. $374 - 104 = c$

$$\begin{array}{r} 374 \\ -\ 104 \\ \hline \end{array}$$

c is _____.

5. $5 + 8 + 12 = n$

$$\begin{array}{r} 5 \\ 8 \\ +\ 12 \\ \hline \end{array}$$

n is _____.

6. $d = 495 - 261$

$$\begin{array}{r} 495 \\ -\ 261 \\ \hline \end{array}$$

d is _____.

7. $806 - 500 = g$

$$\begin{array}{r} 806 \\ -\ 500 \\ \hline \end{array}$$

g is _____.

8. $m = 463 + 453$

$$\begin{array}{r} 463 \\ +\ 453 \\ \hline \end{array}$$

m is _____.

9. $g = 300 - 200$

$$\begin{array}{r} 300 \\ -\ 200 \\ \hline \end{array}$$

g is _____.

10. The teacher told John and Tom to subtract 132 from 536. John said, "The missing addend is 405." Tom said, "The missing addend is 403." _____ (John, Tom, neither) is correct.

UNIT 7

Make the sentences true.

1. $54 - 27 = n$

$$\begin{array}{r} 54 \\ -\ 27 \\ \hline \end{array}$$

n is _____.

2. $54 + 27 = p$

$$\begin{array}{r} 54 \\ +\ 27 \\ \hline \end{array}$$

p is _____.

3. $728 - 319 = r$

$$\begin{array}{r} 728 \\ -\ 319 \\ \hline \end{array}$$

r is _____.

4. $a = 926 - 454$

$$\begin{array}{r} 926 \\ -\ 454 \\ \hline \end{array}$$

a is _____.

5. $m = 720 - 260$

$$\begin{array}{r} 720 \\ -\ 260 \\ \hline \end{array}$$

m is _____.

6. $833 - 524 = b$

$$\begin{array}{r} 833 \\ -\ 524 \\ \hline \end{array}$$

b is _____.

7. $h = 902 - 42$

$$\begin{array}{r} 902 \\ -\ 42 \\ \hline \end{array}$$

h is _____.

8. $12 + 19 + 32 = g$

$$\begin{array}{r} 12 \\ 19 \\ +\ 32 \\ \hline \end{array}$$

g is _____.

9. $n = 1294 - 178$

$$\begin{array}{r} 1294 \\ -\ 178 \\ \hline \end{array}$$

n is _____.

10. A sign read, "Buy a motorcycle for 280 dollars." Jim has 252 dollars. He said, "I need only _____ more dollars to buy the motorcycle."

UNIT 7

Subtract.

1. 98 - 54 = c

   c is _____.

2. 676 - 232 = f

   f is _____.

3. 72 - 37 = s

   s is _____.

4. 940 - 718 = e

   e is _____.

Make each a true statement.

5. 6784 = 6127 + y

   y is _____.

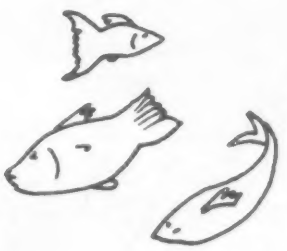
6. 460 + n = 8713

   n is _____.

7. A builder ordered some doors and windows. The total number of doors and windows ordered was 1538. There were 825 doors ordered. How many windows were ordered?

_____

8. In a fish pond there were, 256 fish. Some were silver and some were gold. If 160 were silver, how many were gold? _____



9. In one school there are 720 children. If 308 are girls, how many are boys? _____

10. Jerry's father wants to buy a car that costs 725 dollars. He has 615 dollars. How many more dollars does he need to buy the car? _____

Supply the missing numbers.

11. 1746 − 924

12. 4763 − 1295

13. 4931 − 2753

UNIT 7

Find the missing numbers.

1.
$$\begin{array}{r} 495 \\ -\ 2A8 \\ \hline 21A \end{array}$$

A is _____.

2.
$$\begin{array}{r} 5B6 \\ -\ 39B \\ \hline 1B9 \end{array}$$

B is _____.

*3.
$$\begin{array}{r} 173N \\ -\ 988 \\ \hline 7N6 \end{array}$$

N is _____.

4.
$$\begin{array}{r} 1936 \\ -\ 1E59 \\ \hline EHH \end{array}$$

H is _____.

E is _____.

5.
$$\begin{array}{r} M74 \\ -\ 4MM \\ \hline 475 \end{array}$$

M is _____.

6.
$$\begin{array}{r} 1435 \\ -\ 79K \\ \hline KP9 \end{array}$$

K is _____.

P is _____.

7. Walker collected 947 bottle tops. Bob collected 789 bottle tops. How many fewer bottle tops did Bob collect than Walker? _____

8. The road from Clint to Lakeside passes through Hammond. It is 98 miles from Clint to Hammond and 307 miles from Clint to Lakeside. What is the distance from Hammond to Lakeside along this road? _____

UNIT 7

1. $g = 704 - 146$

$$\begin{array}{r} 704 \\ -\ 146 \\ \hline \end{array}$$

g is _____.

2. $n = 400 - 185$

$$\begin{array}{r} 400 \\ -\ 185 \\ \hline \end{array}$$

n is _____.

3. $1040 - 483 = a$

$$\begin{array}{r} 1040 \\ -\ 483 \\ \hline \end{array}$$

a is _____.

4. $c = 1406 - 527$

$$\begin{array}{r} 1406 \\ -\ 527 \\ \hline \end{array}$$

c is _____.

5. $501 - 148 = q$

$$\begin{array}{r} 501 \\ -\ 148 \\ \hline \end{array}$$

q is _____.

6. $m = 100 - 46$

$$\begin{array}{r} 100 \\ -\ 46 \\ \hline \end{array}$$

m is _____.

7. Tomas and Jose work in the town of Fabens. Tomas earned 425 dollars. Jose earned 1200 dollars. Jose earned _____ more dollars than Tomas.

UNIT 7

Find the missing numbers.

1. $\begin{array}{r} 4586 \\ -\ 2657 \\ \hline \end{array}$

2. $\begin{array}{r} 8622 \\ -\ 1346 \\ \hline \end{array}$

3. $\begin{array}{r} 5682 \\ -\ 473 \\ \hline \end{array}$

4. $\begin{array}{r} 4929 \\ -\ 2859 \\ \hline \end{array}$

5. $\begin{array}{r} 10340 \\ -\ 8156 \\ \hline \end{array}$

6. $\begin{array}{r} 3521 \\ -\ 3499 \\ \hline \end{array}$

7. $5000 - 2999 = (5000 - 3000) + 1 =$ _____

8. $5000 - 3001 = (5000 - 3000) - 1 =$ _____

9. $5000 - 3004 = (5000 - 3000) - 4 =$ _____

10. $5000 - 2499 = (5000 - 2500) + 1 =$ _____

11. $5000 - 2995 = (5000 - 3000) + 5 =$ _____

UNIT 7

1. 46,598
   - 21,472

2. 16,534
   - 10,417

3. 16,800
   - 4,005

4. 40,507
   - 12,183

5. 15,000
   - 12,001

6. 40,000
   - 39,999

7. In 1960, 91,700 passengers left the El Paso Airport in airplanes. In 1963, the number was 140,900. Did more passengers leave El Paso Airport in planes in 1960 or 1963? _____ How many more? In 1963, _____ more left El Paso.

UNIT 7

Make the sentences true.
Use the signs >, < and =.

1. 400 - 100 _____ 300

2. 400 - 99 _____ 300

3. 400 - 121 _____ 300

4. 526 - 300 _____ 200

5. 1457 - 387 _____ 1000

6. 564 - 60 _____ 500

7. 748 - 248 _____ 300

8. 400 - 121 _____ 200

9. 12 - 10 _____ 62 - 60

10. 40 - 9 _____ 40 - 10

11. 400 - 299 _____ (400 - 300) + 1

12. 400 - 301 _____ (400 - 300) - 1

13. Mary is 10 years old. Her mother is 32 years old. Mary said, "My mother is 22 years older than I am because 32 - 10 _____ 22."

UNIT 7

What symbol, >, <, or =, makes each sentence true?

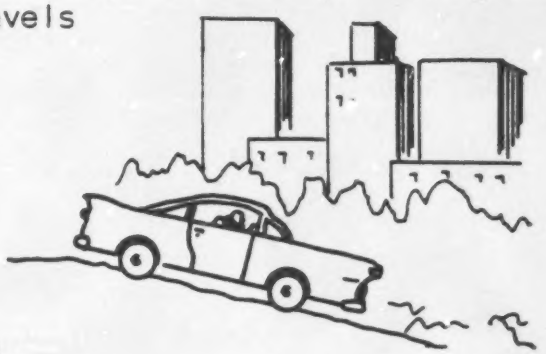
1. 549 + 637 _____ 473 + 395 + 319

2. (472 - 361) + 25 _____ 1033 - 897

3. 394 + (271 - 37) _____ (271 + 394) - 37

4. 642 + 642 + 642 _____ 962 + 962

7. Tom travels from one city to a second city in three days. The first day he goes 214 miles, the second day 179 miles and the third day 249 miles. Marvin makes the trip between the two cities in two days. He goes a different way. He travels 317 miles the first day and 329 the second day. Which one travels more miles than the other?



_____

How many more miles does he travel?

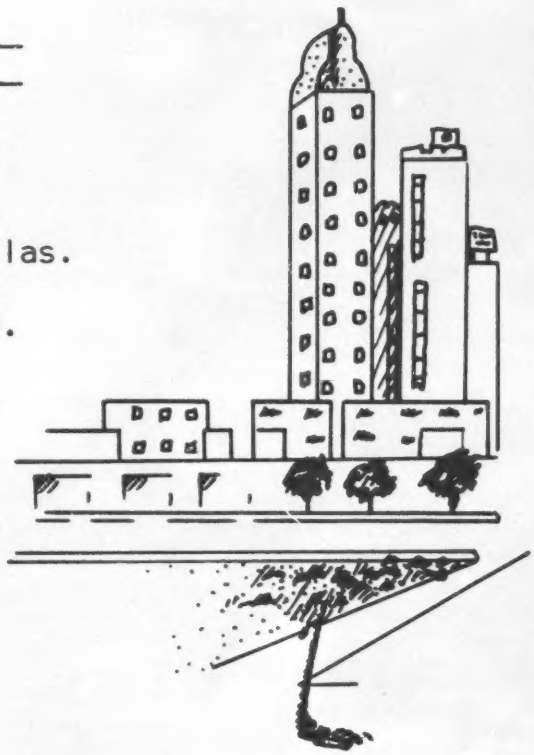
_____

UNIT 7

NUMBER STORIES

1. In North America there are many high mountains. Mount Shasta is 14,162 feet high. Pike's Peak is 14,110 feet high. Guadalupe Peak is 8751 feet high. Of these three mountains, which is the highest? _____ Which is next? _____ How much higher is Pike's Peak than Guadalupe Peak? _____ Which is higher, Mount Shasta or Pike's Peak? _____ How much higher? _____

2. The two largest cities in Texas are Houston and Dallas. In 1960 the population of Houston was about 938,219. The population of Dallas was about 679,684. Which city is the largest? _____ Write a mathematical sentence to show this.



How much larger is the largest city in Texas than the second largest? _____

3. The distance of the railroad from El Paso in Texas to Santa Fe in New Mexico is 335 miles. The train goes through Carrizozo. If it is 129 miles by train from El Paso to Carrizozo, how much farther does the train go from Carrizozo to Santa Fe? _____

4. Niagara Falls are 158 feet high. Yellowstone Falls are 308 feet high. Great Falls are 35 feet high. Which is the highest?

_____

How much higher are Niagara Falls than Great Falls? _____

How much higher are Yellowstone Falls than Niagara Falls? _____

UNIT 7

Supplementary Page

NUMBER STORIES

1. In 1950, there were almost 1,000,000 children enrolled in primary schools in Louisiana. Eleven years later, in 1961, the number was over 2,900,000. About how many more children were enrolled in primary schools in Louisiana in 1961 than in 1950? _____

2. In El Paso there are pants factories. In 1960, 1,530,453 pairs of pants were sold. In 1963, 1,953,651 pairs of pants were sold. How many more pairs of pants were sold in 1963 than in 1960?

_____

3. Texas grows a large share of the world's cotton. In 1964, about 381,506 bales of cotton were sent to other parts of the world. In the month of December, 21,930 bales were sent. How many were sent out during the other months? _____

4. Louisiana ships oil to other parts of the world. In 1963, 63,561 tons were shipped. In 1964, 69,539 tons of oil were shipped. How much more oil was shipped in 1964 than in 1963? _____

UNIT 7

1. Martha's family wants to buy a new car. The type of car they want costs 2560 dollars. Martha's father has 1750 dollars in the bank. This year he plans to save 245 dollars more for the car. How many dollars more will the family need to buy the car? _____

2. Add:

$$\begin{array}{r} 4,320 \\ +\ 8,289 \\ \hline \end{array}$$

3. Subtract:

$$\begin{array}{r} 4,306 \\ -\ 1,427 \\ \hline \end{array}$$

4. Subtract:

$$\begin{array}{r} 72,345 \\ -\ 11,860 \\ \hline \end{array}$$

4. Add:

$$\begin{array}{r} 675 \\ 132 \\ +\ 316 \\ \hline \end{array}$$

6. 26,000 - 14,000 = a a is _____

7. 42,000 + b = 84,000 b is _____

8. 10,000 + c = 30,000 c is _____

UNIT 7

Use the commutative property. Complete each table.

1.

+	0	5	13	34	233	987
0	0	5	13		233	
5		10	18		238	992
13			26	47	246	
34	34	39		68		1021
233				267	466	1220
987	987		1000			1974

2.

+	76	134	
76	152	210	362
134		268	

*3. (Challenge Problem)

Find the sum n: 1 + 2 + 3 + 4 + 5 + 6 = n

Frank has a quick way of finding n.

Frank's way: 1 + 2 + 3 + 4 + 5 + 6 = n

(1 + 6) + (2 + 5) + (3 + 4) = n

3 x 7 = n

n is 21.

Which properties are used in Frank's way?

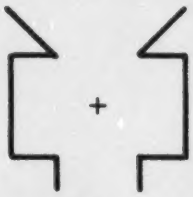
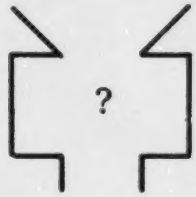
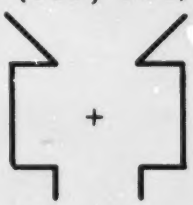
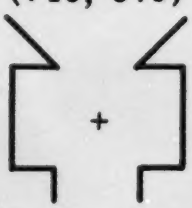
*4. Use Frank's way to find the sum m:

2 + 5 + 8 + 11 + 14 + 17 + 20 + 23 = m

4 x _____ = m

m is _____.

Complete each Operation Machine. Fill in missing numeral or sign.

1. (638, 393)  ———	2. (802, 475) ———	3. (160, 395)  555
4. (834, 476) 1310	5. (859, 584)  ———	6. (653, 293) ———
7. (720, 376) ———	8. (746, 679)  ———	9. (514, 395) 119

UNIT 7

Fill in the blanks. Use the associative property.

The teacher asked, "Who can find the sum of 782 and 368? Calvin said, "I have an easy way to do it." See what he wrote on the board.

$$
\begin{aligned}
782 + 368 &= 782 + (18 + 350) \\
&= (782 + 18) + 350 \\
&= 800 + 350 \\
&= 1150
\end{aligned}
$$

Which property did Calvin use?

Use Calvin's method to find the sums. First fill in the missing numbers.

1. $98 + 14 = 98 + (_____ + 12)$
   $= (98 + _____) + 12$
   $= 100 + _____$
   $= _____$

2. $375 + 49 = 375 + (25 + _____)$
   $= (375 + 25) + _____$
   $= 400 + _____$
   $= _____$

3. $942 + 178 = 942 + (58 + _____)$
   $= (942 + 58) + _____$
   $= 1000 + _____$
   $= _____$

Calvin could also find missing addends by his method.
See what he wrote on the board.

$$44 + n = 142$$
$$(42 + 2) + n = 42 + 100$$
$$42 + (2 + n) = 42 + 100$$

Calvin says, "2 + n = 100. So n is 98."

Use Calvin's method to find the missing addends.

4. $79 + n = 175$
$75 + (4 + n) = 75 + 100$
$4 + n$ is _____.
n is _____.

5. $176 + n = 373$
_____ $+ (3 + n) = 373$
$3 + n$ is _____.
n is _____.